

# RELATIONSHIP BETWEEN LEVEL OF KNOWLEDGE AND MOTIVATION WITH ANTI-TUBERCULOSIS DRUGS ADHERENCE IN TUBERCULOSIS PATIENTS

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## ABSTRACT

Tuberculosis Disease (TB) is still a problem that must be overcome by the community, programs and guidelines for countermeasures have also been carried out by the government to handle this case in accordance with national standards. Is to determine the relationship between knowledge and motivation with adherence to taking anti-tuberculosis drugs in tuberculosis (TB) patients at the Paseh Health Center in 2022. The type of research used is a type of quantitative research with a cross-sectional design. The sampling technique in this study was by accidental sampling with a population of 123 people. This study shows that, the knowledge of tuberculosis sufferers is in the good category, namely 71 (57,7%), the motivation of tuberculosis sufferers is in the high category, namely 86 (69,9%), and drug gathering adherence of tuberculosis sufferers is in the obedient category, namely 69 (56,1%), using the Chi-square statistic test where the degree of confidence used is 95% and  $\alpha = 0,5$  obtained a p value for knowledge of 0,000 and a p value for motivation 0,009. So that the null hypothesis was rejected or in other words statistically it turned out to be proven to be a relationship of knowledge and motivation with adherence to taking anti-tuberculosis drugs. This researcher there is a relationship of knowledge and motivation with adherence to taking tuberculosis medications. Suggestions in this study are expected by health workers to continue to carry out counseling activities regarding medication adherence in tuberculosis sufferers.



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## 1. INTRODUCTION

Tuberculosis (TB) is still a problem that must be overcome by the community, prevention programs and guidelines have also been carried out by the government to handle this case with national standards. This is because there is still a high rate of non-adherence to taking medication in TB patients. Pulmonary TB is an infectious disease that can attack someone with low immunity. This disease is caused by Mycobacterium Tuberculosis which is rod-shaped and is acid-resistant or Acid-Resistant Basil (BTA), and can be transmitted through the air when a person with pulmonary TB speaks or coughs up saliva. (Sunaryati, 2019).

Referring to the *World Health Organization* (WHO) Global TB Report 2020, 10 million people in the world suffer from tuberculosis (TB) and 1.2 million people die every year. Indonesia is one of the countries with the highest burden of TB (tuberculosis) in the world with an estimated number of people falling ill due to TB (tuberculosis) reaching 845,000 with a death rate of 98,000 or equivalent to 11 deaths/hour (WHO Global TB Report, 2020). Of these, only 67% were found and treated, so there were 283,000 TB (tuberculosis) patients who had not been treated and were at risk of increasing the number of cases and transmission of tuberculosis (TB).

Based on a preliminary study conducted at the Paseh Health Center, Paseh District, it was found in 2020 (53,42%) and in 2021 there were findings of positive AFB cases (acid-fast-bacteria) of 14 cases with a total of 62 (68,49%). After conducting interviews with the TB (tuberculosis) field that there are patients with TB (tuberculosis) who have poor knowledge of what TB disease (tuberculosis) is, then what are the symptoms and causes. Who have low motivation, there fore family support and motivation are very important for their recovery. There are tuberculosis (TB) patients who do not comply with taking medication, they say they are lazy to take medication because the treatment time is so long.

## 2. METHOD

This type of research is an analytical description research with a cross sectional approach. This research design is used to examine an event at the same time or at one time. The dependent and independent variables in this research design were assessed simultaneously (Nursalam, 2017).

## 3. RESULTS AND DISCUSSION

### 3.1. Results

#### a. Univariate Analysis

**Table 1 Distribution Frequency of Respondent's Knowledge**

Knowledge	Frequency (f)	Percentage (%)
Less	9	7,3
Enough	43	35,0
Good	71	57,7
<b>Total</b>	<b>123</b>	<b>100</b>

The knowledge of respondents at the Paseh Health Center in 2022 showed that most tuberculosis (TB) patients had good knowledge, namely 71 people (57,7%).

**Table 2 Distribution Frequency of Respondent's Knowledge**

Motivation	Frequency (f)	Percentage (%)
Low	7	5,7
Currently	30	24,4
High	86	69,9
<b>Total</b>	<b>123</b>	<b>100</b>

The motivation of respondents at the Paseh Health Center in 2022 that most tuberculosis (TB) patients have high motivation as many as 86 people (69,9%).

**Table 3 Distribution Frequency of TB Respondent's Medication Adherence**

Medication Adherence	Frequency (f)	Percentage (%)
Not obey	17	13,8
Less obedient	37	30,1
Obedient	69	56,1
<b>Total</b>	<b>123</b>	<b>100</b>

Adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health center in 2022 showed that the majority of tuberculosis (TB) patients were compliant, as many as 69 people (56,1%).

#### b. Bivariate Analysis

##### 1. Relationship between knowledge and adherence to taking anti-tuberculosis drugs

**Table 4 Relationship between knowledge and adherence to taking anti-tuberculosis drugs**

Knowledge	Medication Adherence						Total		P value
	Not obey		Less obedient		Obedient				
	f	%	f	%	f	%	f	%	
Not enough	4	44,4%	0	0%	5	55,6%	9	100%	<b>0,000</b>
Enough	6	14,0%	31	72,1%	6	14,0%	43	100%	
Good	7	9,9%	6	8,5%	58	81,7%	71	100%	
<b>Total</b>	<b>17</b>	<b>13,8%</b>	<b>37</b>	<b>30,1%</b>	<b>69</b>	<b>56,1%</b>	<b>123</b>	<b>100%</b>	

Cross tabulation between the patient's knowledge level and adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health Center in 2022 it can be concluded that out of 71 people have good knowledge, 58 people (81.7%) are obedient to taking anti-tuberculosis (TB) drugs, 6 people ( 8.1%) did not comply with taking tuberculosis drugs, and 7 people (9.9%) did not comply with taking anti-tuberculosis drugs.

By using the Chi square statistical test where the degree of confidence used is 95% and  $\alpha = 0.05$ , the p value is 0.000 where the p value is  $< 0.05$ . So the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between the patient's level of knowledge and adherence to taking anti-tuberculosis (TB) drugs.

## 2. The relationship between motivation and adherence to taking anti-tuberculosis drugs

**Table 5 Relationship between motivation and adherence to taking anti-tuberculosis drugs**

Motivation	Medication Adherence						Total		P value
	Not obey		Less obedient		Obedient				
	f	%	f	%	f	%	f	%	
Low	2	28,6%	5	71,4%	0	0%	7	100%	<b>0,009</b>
Currently	7	23,3%	6	20,0%	17	56,7%	30	100%	
High	8	9,3%	26	30,2%	52	60,5%	86	100%	
<b>Total</b>	<b>17</b>	<b>13,8%</b>	<b>37</b>	<b>30,1%</b>	<b>69</b>	<b>56,1%</b>	<b>123</b>	<b>100%</b>	

Cross tabulation between patient motivation and adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health Center in 2022 can be concluded that of 86 people who have high motivation, 52 people (60,5%) adhere to anti-tuberculosis drugs, 26 people (30,2%) were less compliant in taking anti-tuberculosis drugs, and 8 people (9,3%) did not comply with taking anti-tuberculosis drugs. P-value  $< 0,05$ . So that the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between motivation and adherence to taking anti-tuberculosis drugs.

### 3.2. Discussion

The results of this study indicate that most of the respondents at the Paseh Health Center in 2022 had good knowledge, namely 71 people (57.7%) regarding adherence to taking anti-tuberculosis drugs. Knowledge is the entire ability of individuals to think in a directed and effective manner, so that people who have high knowledge will easily absorb information, suggestions, and advice. The results of this study are also in line with the theory in Notoatmodjo (2010). The theory that supports is the theory of Nursalam, (2013) which says that education is able to support health, improve the quality of life and influence a person's attitude and behavior. The results of this study are also in line with research conducted by Alima Frida et al (2021), from 16 respondents more than most (53.3%) had good knowledge about adherence to taking anti-tuberculosis (TB) drugs. The results of this study are also supported by the research of Anna Silvia Prihantana (2016), from 40 respondents more than 92.42 had good knowledge about adherence to taking anti-tuberculosis (TB) drugs.

Based on the assumption of the researcher in this study that the patient's knowledge of adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health Center was good. The patient is able to answer and know what tuberculosis is, know the signs and symptoms, know what the transmission is like and the tuberculosis treatment schedule. Good knowledge can affect adherence to taking anti-tuberculosis drugs. Generally, someone who has good knowledge will tend to have a good mindset and upbringing so that a patient will obediently take anti-tuberculosis (TB) drugs. This is also influenced by the work of patients at the Paseh Health Center, most of which work so that it will affect the level of knowledge of a patient in terms of understanding and receiving information given regarding adherence to taking anti-tuberculosis (TB) drugs.

The results of this study showed that 86 people (69.9%) at the Paseh Health Center had high motivation towards adherence to taking anti-tuberculosis drugs. This high motivation is due to good knowledge about adherence to taking anti-tuberculosis drugs so that respondents are aware of the importance of adherence to taking anti-tuberculosis drugs.

According to Setiawati (2012), motivation is a series of efforts to provide certain conditions so that individuals are willing to take action in achieving goals. This research is also in line with research conducted

by Indiyah (2018) which shows the results of research with 18 respondents with high motivation (58.1%), respondents with low motivation 8 people (25.8%), and respondents having low motivation. moderate motivation is 5 people (16,1%). The results of this study are also in line with the results of research conducted by K Everentia Ngasu (2019), which explains that 23 respondents (67.6) have high motivation and 11 respondents (32.4) have moderate motivation.

Based on the researcher's assumption in this study that the motivation of the patient towards adherence to taking anti-tuberculosis (TB) drugs. The motivation of a good patient can also be influenced by good knowledge because most patients at the Paseh Health Center have good knowledge. The better the motivation of a patient, then he will act and respond to something he wants so that a patient is obedient in taking anti-tuberculosis drugs. The results showed that almost all patients at the Paseh Public Health Center were obedient to taking anti-tuberculosis drugs, as many as 69 people (56.1%) were obedient to taking anti-tuberculosis drugs according to a predetermined schedule and scheduled by the tuberculosis (TB) officer. According to WHO (2013) states that medication adherence is the patient's conformity with the recommendations of service providers related to the dosage, regularity of taking medication and the recommended duration of treatment.

The results of this study are in accordance with research conducted by Endang Yuswatiningsih (2018), stating that the results of the study with a total of 31 respondents were found to be obedient to taking anti-tuberculosis drugs as many as 27 people (87.1%). And supported by research by Aris Widiyanto (2016), stated the results of the study with a total of 25 respondents (65.8%) being obedient to taking anti-tuberculosis drugs.

Based on the assumption of the researcher in this study that of the 123 respondents who adhered to taking medication, 69 people (56.1%) at the Paseh Health Center. It is possible that the respondent already understands and understands about tuberculosis so that the respondent takes medicine according to the type, dose, method of taking medicine, time to take medicine and the number of days of taking medicine as recommended by the doctor. Tuberculosis treatment adherence is very important, because if the treatment is not carried out regularly and not in accordance with the specified time, it will cause tuberculosis germs to develop immunity to anti-tuberculosis drugs. Generally, patients take medication between 6 months to ensure recovery, but in some cases it can take longer.

Cross tabulation between the patient's knowledge level and adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health Center in 2022 it can be concluded that out of 71 people have good knowledge, 58 people (81.7%) are obedient to taking anti-tuberculosis (TB) drugs, 31 people ( 72.1%) did not comply with taking anti-tuberculosis (TB) drugs, and 4 people (44.4%) did not comply with taking anti-tuberculosis (TB) drugs. By using the Chi square statistical test where the degree of confidence used is 95% and  $\alpha = 0.05$ , the p value is 0.000 where the p value is  $< 0.05$ . So the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between the patient's level of knowledge and adherence to taking anti-tuberculosis (TB) drugs. Knowledge is curiosity through sensory processes, especially in the eyes and ears of certain objects. Knowledge is an important domain in the formation of one's behavior (Donsu, 2017).

This is in accordance with the results of research by Fitria and Mutia (2016), that there is a relationship between knowledge and adherence to taking anti-tuberculosis drugs. This is also supported by the results of research by Purwanto (2010), which states that there is a significant relationship between knowledge and adherence to taking anti-tuberculosis drugs in tuberculosis (TB) patients.

Based on the assumption of the researcher in this study that there is a relationship between the patient's knowledge and adherence to taking anti-tuberculosis drugs, which means that the better the patient's level of knowledge about adherence to taking anti-tuberculosis drugs, there is a tendency for patients to adhere to taking anti-tuberculosis drugs. Patient knowledge is one of the factors that affect patient compliance, because patient non-compliance will increase the risk of developing health problems or worsening the illness. Especially in pulmonary tuberculosis, patient compliance in treatment is a determining factor for the success of healing the disease. This is because pulmonary tuberculosis takes a long time to heal.

Cross tabulation between patient motivation and adherence to taking anti-tuberculosis (TB) drugs at the Paseh Health Center in 2022 it can be concluded that of 86 people who have high motivation, 52 people (60.5%) adhere to anti-tuberculosis drugs, 6 people (20.0%) ) were less compliant with taking anti-tuberculosis drugs, and 2 people (28.6%) were not compliant with taking anti-tuberculosis drugs. By using

the Chi square statistical test where the degree of confidence used is 95% and  $\alpha = 0.05$ , the p value is 0.009 where the p value is  $< 0.05$ . So that the null hypothesis is rejected or in other words statistically it means that there is a significant relationship between motivation and adherence to taking anti-tuberculosis drugs.

Motivation is a human psychological characteristic that contributes to a person's level of commitment. This includes the factors that cause, channel, and maintain human behavior towards a certain determination (Stonner & Freeman, 1995) in (Suarli & Bahtiar, 2013).

This is also supported by the results of research conducted by Nurwadji and Fajri (2013), that the motivation of tuberculosis patients in achieving healing has a relationship with adherence to taking anti-tuberculosis drugs. The results of this study are also in line with research conducted by Prasetya (2012), which states that there is a significant relationship between motivation and adherence to treatment and also taking anti-tuberculosis drugs. Based on the assumption of the researcher in this study that motivation is related to adherence to taking anti-tuberculosis drugs at the Paseh Health Center, which means that the better the motivation of the patient, the tendency of the patient to comply with taking anti-tuberculosis drugs. Respondents with a high school education background are able to receive information well.

#### 4. CONCLUSION

From the results of research conducted at the Paseh Health Center regarding the Relationship between Knowledge and Motivation with Compliance with taking Anti Tuberculosis (TB) Drugs at the Paseh Health Center in 2022, conclusions can be drawn :

1. Patient's knowledge about adherence to taking anti-tuberculosis drugs is the good category as many as 71 people (57,7%).
2. Patient's motivation towards adherence to taking anti-tuberculosis drugs is in the high category as many as 86 people (69,9%).
3. There is a significant relationship between knowledge and adherence to taking anti-tuberculosis drugs at the Paseh Health Center, with a p value of 0,000.
4. There is a significant relationship between motivation and adherence to taking anti-tuberculosis drugs at the Paseh Health Center, with a p value of 0,009.

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