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# Analysis Of Compliance In Taking Anti-Tuberculosis Drug (Oat) On The Success Of Therapy In Drug-Sensitive Tuberculosis Patients At Muhammadiyah Ahmad Dahlan Hospital, Kediri City

## Gading Nurantika<sup>1</sup>, Chinthia Devientasari<sup>1</sup>, Hanik Maria Dewi<sup>1</sup>, Hanie Kusuma Wardani<sup>1</sup>

<sup>1</sup>Pharmaceutical Study Program, Faculty of FAKAR, University of Strada Indonesia Kediri, Indonesia

\*Corresponding author: gnantika15@gmail.com

#### ABSTRACT

Tuberculosis, also known as "tubercle bacilli" (TB), is a directly transmissible disease caused by the Mycobacterium tuberculosis bacteria. Tuberculosis is a leading infectious disease that causes death worldwide. The WHO also identified the importance of achieving a high level of patient compliance in TB treatment to control the spread of this disease. This study aims to measure the extent to which tuberculosis patients at Muhammadiyah Ahmad Dahlan Hospital in Kediri City adhere to their treatment, thus achieving the success of OAT (Anti-Tuberculosis Drugs) therapy. The results of this study are expected to provide insights into the relationship between medication adherence and treatment success in drug-sensitive TB patients, as well as offer recommendations for improving patient compliance in TB treatment. The design of this study is quantitative, utilizing a retrospective cohort research design. The study population consists of all pulmonary tuberculosis (TB) patients who have undergone TB treatment for six months at Muhammadiyah Ahmad Dahlan Hospital in Kediri City, totaling 42 individuals. The sample was taken using a total population sampling method. Data analysis was conducted using cross-tabulation analysis with a chi-square test. The results of the study revealed that 18 patients (43%) had high adherence, 19 patients (45%) had moderate adherence, and 5 patients (12%) had low adherence. The majority of patients, 41 individuals (98%), were cured, while 1 patient (2%) was not cured. The chi-square test results showed a p-value of 0.023<0.005. The conclusion of this study is that there is a correlation between adherence to anti-tuberculosis (OAT) medication and the success of therapy. It is recommended that the hospital pays closer attention and provides motivation for patients to continue their treatment until full recovery.

**Keywords:** Medication Adherence, TB Patients, Treatment Success.

#### INTRODUCTION

The World Health Organization (WHO) reports that tuberculosis (TB) is one of the most common infectious diseases causing death worldwide. An estimated 10.6 million people will be infected with tuberculosis worldwide in 2022. Based on World Health Organization (WHO) data released on November 7, 2023, Indonesia is still the top two countries in the world with tuberculosis (TB) infections.

The number of TB cases from East Java province in 2022 was 30,009 people. Nationally and in each province, the number of cases in men is higher than in women (Indonesian Health Profile, 2020). According to data recorded by the Health DepartmentKediri City estimates that 1,381 residents will be infected with Mycobacterium Tuberculosis bacteria in 2023.

Infection is the entry and spread of microorganisms (infectious agents) into the host body. Infectious agents (pathogens) do not necessarily cause disease in humans. Colonization is when microorganisms invade the body and multiply without causing symptoms. Infection is symptomatic



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because pathogenic microorganisms multiply and cause clinical signs and symptoms. Conversely, this disease is asymptomatic if it does not cause symptoms (Padoli, 2016).

Pulmonary tuberculosis is an infectious disease caused by Mycobacterium tuberculosis, known as bacillus mycobacterium (BTA), while the one that can cause respiratory disease is known as Mycobacterium other than tuberculosis (MOTT) and can hinder the diagnosis and treatment of pulmonary TB (Rizqiya et al., 2021).

Patient compliance in long-term TB treatment is very important to control the disease. The number of drugs taken is one factor in compliance. Treatment for pulmonary tuberculosis usually takes 6 months, but it is estimated that more than a quarter of TB patients do not complete it. Discontinuation of treatment or failure to comply with directly observed short-term treatment standards can lead to disease relapse and the development of secondary resistance or Multi Drug Resistance (MDR) so that TB treatment can become complicated and expensive (Faizah et al., 2016)

The purpose of this study is to measure the extent to which tuberculosis patients at RSM Ahmad Dahlan Kediri City comply with treatment so that the success of OAT therapy can be achieved. With this study, it is expected to be an effort to increase patient compliance so that the success of therapy in TB patients is achieved.

#### **METHODS**

This study is a quantitative descriptive study with a retrospective cohort study design. Data collection was carried out retrospectively by processing tuberculosis patient treatment data through secondary data such as medical records. The population of this study was tuberculosis patients treated at RSM Ahmad Dahlan, Kediri City, namely 60 patients based on data from 2022-2023. The sampling data collection technique was carried out by total sampling for 1 month, namely July 2024, data collection only once within a predetermined time.. As for the criteriaThe inclusion of this study were: 1) Patients with a diagnosis of TB, 2) Tuberculosis patients with an age range of 17-65 years, 3) Tuberculosis patients registered at RSM Ahmad Dahlan, Kediri City. The variables of this study were the independent variable of treatment compliance and the dependent variable of therapy success. This study uses an observation sheet research instrument to analyzeThe relationship between treatment success and medication compliance in tuberculosis patients at RSM Ahmad Dahlan, Kediri City. In this study, data was analyzed and processed using the SPSS statistical program using the chi-square test.

## RESULTS RESPONDENT CHARACTERISTICS

Category

Pneumonia

DM & Cytisis

**HIV & Cholestasis** 

		( )	
Gender			
Man	28	67	
Woman	14	33	
Age			
< 25 Years	3	7	
26-45 Years	10	24	
46-65 Years	18	43	
> 65 Years	11	26	
Accompanying Diseases			
Unknown	31	74	
HIV	4	10	
DM	2	5	
Hyperthyroidism	1	2	
Hypoglycemia	1	2	

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Table 1. Respondent Characteristics

Frequency

Percentage (%)

2

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Source: SPSS Results

Based on the table above, it is known that most respondents were male (28 respondents or 67%), aged 46-65 years (18 respondents or 43%), and the type of accompanying illness was unknown (31 respondents or 74%).

#### CHARACTERISTICS OF VARIABLES

Table 2. Variable Characteristics

Category	Frequency	Percentage (%)
Compliance		
Tall	18	43
Currently	19	45
Low	5	12
BTA		
Negative	41	98
Positive	1	2

Source: SPSS Results

Based on the table above, it is known that the most respondents had moderate compliance, namely 19 respondents (45%), and the majority of respondents had negative BTA or recovered, namely 41 respondents (98%).

#### **CROSS TABULATION**

Table 3. Cross Tabulation of Gender with Compliance Variable

			Complian	ce		
			Tall	Currently	Low	Total
Gender	Man	F	14	13	1	28
		%	33.3%	31.0%	2.4%	66.7%
	Woman	F	4	6	4	14
		%	9.5%	14.3%	9.5%	33.3%
Total		F	18	19	5	42
		%	42.9%	45.2%	11.9%	100.0%

Source: SPSS Results

Based on the table above, it is known that the majority of male respondents have high compliance, namely 14 respondents (33.3%).

Table 4. Cross Tabulation of Age with Compliance Variable

			Compliance			
			Tall	Currently	Low	Total
Age	< 25 Years	F	1	2	0	3
		%	2.4%	4.8%	0.0%	7.1%
	26-45 Years	F	3	6	1	10
		%	7.1%	14.3%	2.4%	23.8%
	46-65 Years	F	11	6	1	18
		%	26.2%	14.3%	2.4%	42.9%
	> 65 Years	F	3	5	3	11
		%	7.1%	11.9%	7.1%	26.2%
Total		F	18	19	5	42
		%	42.9%	45.2%	11.9%	100.0%

Source: SPSS Results

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Based on the table above, it is known that the majority of respondents in the 46-65 year age range have high compliance, namely 11 respondents (26.2%).

Table 5. Cross Tabulation of Comorbidities with Compliance Variables

			Complianc	ce		
			Tall	Currently	Low	Total
Comorbid	Unknown	F	14	14	3	31
		%	33.3%	33.3%	7.1%	73.8%
	HIV	F	1	3	0	4
		%	2.4%	7.1%	0.0%	9.5%
	DM	F	1	0	1	2
		%	2.4%	0.0%	2.4%	4.8%
	Hyperthyroidism	F	0	1	0	1
		%	0.0%	2.4%	0.0%	2.4%
	Hypoglycemia	F	1	0	0	1
		%	2.4%	0.0%	0.0%	2.4%
	Pneumonia	F	0	1	0	1
		%	0.0%	2.4%	0.0%	2.4%
	HIV & Cholestasis	F	0	0	1	1
		%	0.0%	0.0%	2.4%	2.4%
	DM & Cytisis	F	1	0	0	1
	-	%	2.4%	0.0%	0.0%	2.4%
Total		F	18	19	5	42
		%	42.9%	45.2%	11.9%	100.0%

Source: SPSS Results

Based on the table above, it is known that the majority of respondents whose comorbidities are unknown have high compliance, namely 14 respondents (33.3%).

Table 6. Cross Tabulation of Gender with BTA

			BTA		
			Negative	Positive	Total
Gender	Man	F	28	0	28
		%	66.7%	0.0%	66.7%
	Woman	F	13	1	14
		%	31.0%	2.4%	33.3%
Total		F	41	1	42
		%	97.6%	2.4%	100.0%

Source: SPSS Results

Based on the table above, it is known that the majority of respondents were male with negative BTA, namely 28 respondents (66.7%).

Table 7. Cross Tabulation of Age with BTA

			BTA		
			Negative	Positive	Total
Age	< 25 Years	F	3	0	3
		%	7.1%	0.0%	7.1%
	26-45 Years	F	10	0	10
		%	23.8%	0.0%	23.8%
	46-65 Years	F	18	0	18
		%	42.9%	0.0%	42.9%
	> 65 Years	F	10	1	11
		%	23.8%	2.4%	26.2%

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Total	F	41	1	42	
	%	97.6%	2.4%	100.0%	

Source: SPSS Results

Based on the table above, it is known that the majority of respondents were aged between 46-65 years with negative BTA, namely 18 respondents (42.9%).

Table 8. Cross Tabulation of Comorbidities with BTA

			BTA Negative	Positive	Total
Comorbid	Unknown	F	31	0	31
		%	73.8%	0.0%	73.8%
	HIV	F	4	0	4
		%	9.5%	0.0%	9.5%
	DM	F	2	0	2
		%	4.8%	0.0%	4.8%
	Hyperthyroidism	F	1	0	1
		%	2.4%	0.0%	2.4%
	Hypoglycemia	F	1	0	1
		%	2.4%	0.0%	2.4%
	Pneumonia	F	1	0	1
		%	2.4%	0.0%	2.4%
	HIV & Cholestasis	F	0	1	1
		%	0.0%	2.4%	2.4%
	DM & Cytisis	F	1	0	1
		%	2.4%	0.0%	2.4%
Total		F	41	1	42
		%	97.6%	2.4%	100.0%

Source: SPSS Results

Based on the table above, it is known that the majority of respondents did not know their accompanying illnesses with negative BTA, namely 31 respondents (73.8%).

Table 9. Cross Tabulation of Compliance with BTA

			BTA		
			Negative	Positive	Total
Compliance	Tall	F	18	0	18
		%	42.9%	0.0%	42.9%
	Currently	F	19	0	19
		%	45.2%	0.0%	45.2%
	Low	F	4	1	5
		%	9.5%	2.4%	11.9%
Total		F	41	1	42
		%	97.6%	2.4%	100.0%

Source: SPSS Results

Based on the table above, it is known that the most respondents had moderate compliance with negative BTA, namely 19 respondents (45.2%).

#### DATA ANALYSIS

Table 10. Data Analysis of the Relationship between Compliance and BTA

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Variables	Significance	Information
Compliance with BTA	0.023	There is a Relationship

Source: SPSS Results

Based on the results of data analysis using the ci-square test, the significance value is 0.023 <0.005, meaning that there is a relationship between the success of treatment and the compliance of taking medication for tuberculosis patients at RSM Ahmad Dahlan, Kediri City.

#### **DISCUSSION**

### Success of Therapy in Tuberculosis Patients Using OAT at Muhammadiyah Ahmad Dahlan Hospital, Kediri City

Research conducted at RSM Ahamad Dahlan, Kediri City on the success of therapy in tuberculosis patients using OAT in 42 respondents was found to be...Most respondents with negative BTA or recovered, namely 41 respondents (98%) and only 1 respondent (2%) had a positive BTA value. These results indicate that the success of the treatment carried out in the high category is proven by only 1 respondent who had positive BTA.

This study is in line with Merysca et al. (2022), which showed that 25 people (83.3%) were successful in therapy, while 5 people (16.7%) were unsuccessful. Research by Kusumawati et al. (2023) showed that most pulmonary tuberculosis patients at the Muhammadiyah Ahmad Dahlan Hospital, Kediri recovered thanks to the use of anti-tuberculosis drugs, especially fixed-dose combinations, according to treatment guidelines. Success in curing TB is related to gender, proven by results in the field most respondents were male with negative BTA, namely 28 respondents (66.7%). While many respondents were female with negative BTA, namely 13 respondents (31%) and positive BTA as many as 1 respondent (2.4%). The results of this study are in accordance with the Riskedas theory (2018) that men are susceptible to pulmonary tuberculosis due to risk factors such as smoking and alcohol consumption which can weaken the body's immune system.

Kusumawati et al.'s (2023) research shows that the prevalence of pulmonary TB is higher in men than in women, possibly due to a lifestyle that increases the risk of exposure. The majority of male patients have higher mobility and activity, so they are more at risk of being infected with Mycobacteria tuberculosis than women (Rosyanti, 2020). The age of the respondents has no relation to the success of TB recovery, as proven by the results of the cross-tabulation between age and known success.It is known that most respondents are aged between 46-65 years with negative BTA, namely 18 respondents (42.9%). Respondents aged > 25 years with negative BTA are 3 respondents (7.1%). Respondents aged between 26-45 years with negative BTA are 10 respondents (23.8%). While respondent aged > 65 years with negative BTA are 10 respondents (23.8%) and positive BTA is 1 respondent (2.4%). These results show that a person's age is not related to the success of healing from TB.

This study differs from Afwansyah and Dania (2022) who found that tuberculosis patients were dominated by those over 65 years of age (23%). The age group of 35-44 years also recorded 23%, followed by 25-34 years (20%), 15-24 years (17%), 55-64 years (13%), and 45-54 years (3%). Research by Kusumawati et al. (2023) showed that the age group of 65 years and over had the most cases, followed by the age group of 55-64 years. The age of the respondents has nothing to do with the success of TB recovery, this could be because neither young nor old age is a guarantee, but because of other factors such as compliance with treatment or the moral support they receive.

Meanwhile, it is known that the success of treatment for accompanying illnesses isIt is known that most respondents do not know their comorbidities with negative BTA, namely 31 respondents (73.8%). HIV disease with negative BTA as many as 4 respondents (4.1%), DM disease with negative BTA as many as 1 respondent (2.4%), hyperteroid disease with negative BTA as many as 1 respondent (2.4%), pneumonia disease with negative BTA as many as 1 respondent (2.4%), HIV & cholestasis disease with positive BTA as many as 1 respondent (2.4%) and DM & cystitis disease with negative BTA as many as 1 respondent (2.4%). These results indicate that comorbidities are related to the success of the treatment carried out, as

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evidenced by the results where respondents with HIV & cholestasis did not recover after undergoing treatment.

Tuberculosis treatment is divided into two phases. The first is the intensive phase which lasts for two months, and the other is the continuous phase which lasts for four months. The rule of TB treatment is to follow the doctor's advice strictly to prevent bacterial resistance to drugs. Combination drugs consist of main drugs (INH, rifampicin, pyrazinamide, streptomycin, ethambutol) and additional drugs (kanamycin, amikacin, quinolones).

Based on data processed in 2023, at the Muhammadiyah Ahmad Dahlan Hospital in Kediri City, drug use was carried out using a fixed dose combination known as OAT KDT (Fixed Dose Combination Anti-Tuberculosis Drugs) for patients who had been diagnosed with pulmonary tuberculosis. The purpose of using OAT KDT is to increase patient compliance in undergoing treatment. However, inappropriate prescribing can lead to the risk of toxicity or drug resistance (Kusumawati, et al., 2023).

Based on the explanation above, the researcher assumes that the success rate of treatment at the Muhammadiyah Ahamad Dahlan Hospital in Kediri City is in the good category. This is proven by the results of the study where out of 42 people who recovered, only 1 respondent did not recover. Respondents who did not recover were caused by the presence of comorbidities, namelyHIV & cholestasis, this could happen because the TB drugs taken are not properly absorbed by the body due to disruption of the respondent's organ function due to accompanying illnesses and the respondent's age which is quite old, namely over 65 years of age. The success of TB treatment is marked by the conversion of positive BTA to negative and an increase in the patient's quality of life. Therapy can be improved by implementing PHBS, consuming nutritious food, getting enough rest, exercising regularly, and avoiding smoking and stress. Good physical and mental condition of respondentswill be very helpful in the process of successful TB recovery, with a healthy body condition the respondent will be more enthusiastic in undergoing the treatment process which is quite long and tiring.

## Level of Medication Compliance of Tuberculosis Patients at Muhammadiyah Ahmad Dahlan Hospital, Kediri City.

The results of research conducted at RSM Ahamad Dahlan, Kediri City regarding the level of compliance in taking medication for tuberculosis patients in 42 respondents showed that Most respondents had moderate compliance, namely 19 respondents (45%), high compliance was 18 respondents (43%) and low compliance was 5 respondents (12%). These results show that the level of compliance of respondents during treatment is in the fairly good category.

This study supports the results of Afwansyah and Dania (2022) which showed that 23 (77%) patients had high compliance and 7 (23%) moderate. In addition, the study by Ambarwati and Perwitasari (2022) also discussed patient compliance with TB treatment. The average compliance of pulmonary tuberculosis patients with treatment was 50% in the 3rd month, 62.23% in the 4th month, 69.23% in the 5th month, and 60.82% in the 6th month. In contrast, non-compliance was recorded at 50% in the 3rd month, 37.50% in the 4th month, 30.77% in the 5th month, and 39.18% in the 6th month. Overall, 60.82% of patients were compliant and 39.19% were non-compliant.

Respondent compliance based on gender shows that men have the highest high compliance with 14 respondents (33.3%), followed by moderate compliance with 13 respondents (31%) and low compliance with 1 respondent (2.4%). Meanwhile, women have high compliance with 4 respondents (9.5%), moderate compliance with 6 respondents (14.3%), and low compliance with 4 respondents (9.5%).

Respondents' age did not affect medication adherence. From the analysis results, respondents aged 46-65 years showed the highest compliance, namely 11 respondents (26.2%), while those aged <25 years only had 1 respondent (2.4%) with high compliance. Respondents aged 26-45 years: high compliance 3 (7.1%), moderate 6 (14.3%), low 1 (2.4%). Age> 65 years: high compliance 3 (7.1%), moderate 5 (14.9%), low 3 (7.1%). These results indicate that age does not affect TB medication adherence.

Meanwhile, compliance based on comorbidities is known that most respondents who do not know their comorbidities have high compliance, namely 14 respondents (33.3%), moderate compliance is 14 respondents (33.3%) and low compliance is 3 respondents (7.1%). HIV disease with high compliance

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is 1 respondent (2.4%) and moderate compliance is 3 respondents (7.1%). DM disease with high and low compliance is 1 respondent each (2.4%). Hyperthyroid disease with moderate compliance is 1 respondent (2.4%), hypoglycemia disease with high compliance is 1 respondent (2.4%), pneumonia disease with moderate compliance is 1 respondent (2.4%), HIV & cholestasis disease with low compliance is 1 respondent (2.4%) and DM & cystitis disease with high compliance is 1 respondent (2.4%). These results indicate that compliance with taking medication can be influenced by the presence of comorbidities owned by respondents, as evidenced by the results where respondents with HIV & cholestasis disease have low compliance as much as 1 respondent (2.4%).

Compliance is the patient's behavior to follow medical orders or can be interpreted as an individual's ability to follow recommended medical practices (Purwanto, 2016). Patients are considered compliant, meaning that patients can complete treatment regularly without stopping treatment for 6 to 9 months (Ministry of Health of the Republic of Indonesia, 2015). Research conducted by Febrianti and Perwitasari (2021) showed that compliance with pulmonary tuberculosis patient treatment was included in the compliance category with a figure of 92.58%. This is due to the patient's motivation to recover and fear if the disease continues.

Non-compliance of tuberculosis patients with treatment is caused by several factors, the first of which is personal factors. Personal factors play a very important role in the success of anti-TB treatment. Knowledge of TB patients about the side effects of TB treatment affects the success of TB treatment. Tuberculosis patients with low knowledge are 2.9 times more likely to be non-compliant than tuberculosis patients with high knowledge (Wulandari, 2015). Often, tuberculosis (TB) patients experience stress problems that arise both physically and behaviorally as a result of their medical condition. Stress that is not managed properly can cause irritability, anxiety, negative thoughts, hopelessness, and feelings of helplessness. This condition can cause tuberculosis (TB) patients to not take their medication regularly or even stop taking it, which has an impact on their quality of life (Soedarto, 2018).

Based on the explanation above, the researcher assumes that the medication compliance of the respondents is already in the fairly good category with the results of only 5 respondents in the low category from a total of 42 respondents. The level of compliance in this study was dominated by male respondents, this happened because most of the respondents were male. Male respondents were more likely to get TB, which could be caused by their habits of not doing PHBS (Clean and Healthy Living Behavior) such as not washing hands, often eating and hanging out outside the home so that it is very easy to get infected. while the age of the respondents is not related to medication compliance where young or old age does not affect the high level of compliance in taking medication.medication adherence can be influenced by the presence of comorbidities in respondents, as evidenced by the results where respondents with HIV & cholestasis had low adherence, as many as 1 respondent (2.4%). Compliance with taking medication can be influenced by the visits made by respondents in taking medication according to the doctor's advice. In addition, consistency in taking medication must be done every day with a fairly long period of time according to the doctor's advice. In addition, there are several factors that can influence compliance including family support, stress due to the obligation to take medication for a fairly long period of time and physical health.

## The Relationship Between Treatment Success and Medication Compliance of Tuberculosis Patients at Muhammadiyah Ahmad Dahlan Hospital, Kediri City.

The study conducted using the chi-square test on 42 respondents to analyze the success of treatment and compliance with tuberculosis patient treatment at the Muhammadiyah Ahmad Dahlan Hospital in Kediri City showed a significance value of 0.023. between the success of treatment and patient compliance with tuberculosis treatment. This study is consistent with the research of Merysca et al. (2022) conducted a study, obtained a significant value (p <0.05) which showed that there was a relationship between the results of compliance measurements and the success of tuberculosis patient treatment, and the more consistent the patient, the greater the chance of success. Supported by research by Tampoliu et al. (2021) showed a relationship between compliance and patient recovery.

The success of treatment for healing is related to compliance with taking medication, according to the results of field research it is known thatmost respondents who have moderate compliance with Gading Nurantika et.al (Analysis Of Compliance In Taking Anti-Tuberculosis Drug (Oat) On The Success Of Therapy In Drug-Sensitive Tuberculosis Patients At Muhammadiyah Ahmad Dahlan Hospital, Kediri City)

negative BTA are 19 respondents (45.2%), moderate compliance with negative BTA are 18 respondents (42.9%). While for low compliance with negative BTA are 4 respondents (9.5%) and positive BTA are 1 respondent (2.4%). These results show that good and sufficient compliance can affect the healing value, and vice versa, where poor compliance with taking medication will not result in healing.

According to Widiyanto (2017), patient compliance is a factor that greatly influences the success of tuberculosis patient treatment. According to Amran et al. (2021), non-compliance with pulmonary tuberculosis patient treatment can be caused by patients forgetting to take their medication, patients not taking their medication at the right time, or patients not being used to taking their medication at the right time, delays in taking their medication, and delays in examining patient mucus.

Patient adherence to long-term tuberculosis treatment is critical to controlling the disease, with the number of drugs taken being a factor influencing adherence. Pulmonary tuberculosis treatment lasts for 6 months, but more than a quarter of patients are estimated to fail to complete it. Interruption of treatment or non-adherence to DOTS criteria can lead to disease relapse and secondary resistance, making treatment more complicated and expensive (Faizah, 2016).

Based on the explanation above, the researcher assumes that the higher the compliance value, the higher the success of the tuberculosis therapy that is being carried out, while poor compliance will affect failure according to the results in the field where compliance with taking medication is a factor in the success of the therapy being carried out, in addition, the accompanying illnesses owned by the patient are one of the reasons for the success of the treatment. Rational use of drugs and satisfactory treatment results are very important in controlling pulmonary tuberculosis. The success of treatment can be determined based on the final results of sputum examination using BTA and a certificate of recovery in the patient's medical file. There is a relationship between treatment compliance and the success of patient treatment, where patients who recover will be more compliant than patients who are not compliant. No patients in this study experienced serious side effects that required a change in treatment. However, this can lead to non-compliance because it causes discomfort. During the investigation, tuberculosis authorities generally advised patients to continue taking their medication. For example, patients who experience nausea after taking medication can change their medication schedule from taking it one hour before breakfast to taking it at night before going to bed so that the nausea effect is no longer felt.

#### **CONCLUSION**

Compliance with taking anti-tuberculosis drugs (OAT) affects the success of therapy in TB patients at RSM Ahmad Dahlan from 22 respondents were known to have It is known that the majority of respondents with negative BTA or recovered, namely 41 respondents (98%) and only 1 respondent (2%) had a positive BTA value. The level of compliance of respondents in the high category is known from 42 respondents. Most respondents had moderate compliance, namely 19 respondents (45%), high compliance was 18 respondents (43%) and low compliance was 5 respondents (12%). Meanwhile, the relationship between treatment success and medication compliance in tuberculosis patients based on statistical tests that have been conducted in Ahmad Dahlan Hospital, Kediri Cityknown significant value 0.023<0.05, value meaning there is a relationship success of treatment with compliance in taking medication for tuberculosis patients. Respondents are expected to be more obedient during the TB treatment process in order to achieve successful treatment by following all recommendations from health services.

#### REFERENCE

Dewi, LPK (2020). Acid-fast bacillus examination to help diagnose Tuberculosis. International Journal of Applied Chemistry Research, 1(1), 16.

Faizah, U., F. Agiananda, NS Winarsih, TT Ginting, F. Isbaniah, SD Elvira, and LESIG 2016. Psychiatric Disorders of MDR-TB (Multi Drug Resistant) Patients and Psychosocial Stress Affecting Them at Persahabatan Hospital. J Indon Med Assoc. 66:10:473–480.

- Gading Nurantika et.al (Analysis Of Compliance In Taking Anti-Tuberculosis Drug (Oat) On The Success Of Therapy In Drug-Sensitive Tuberculosis Patients At Muhammadiyah Ahmad Dahlan Hospital, Kediri City)
- Khemal Mubaraq, FAI (2021). Relationship between Thorax X-ray Examination Results and Sputum Examination Results Positivity in Pulmonary TB Patients at the East Aceh District Government Hospital for the Period January 2018-August 2019. Jurnal Ilmiah Kohesi, 5(3), 63–69.
- Meyrisca, M., Susanti, R., & Nurmainah. (2022). The Relationship between Compliance in the Use of Anti-Tuberculosis Drugs and the Success of Treatment of Tuberculosis Patients at the Sungai Betung Bengkayang Health Center. Lumbung Farmasi; Journal of Pharmaceutical Sciences, 3(2), 277–282.
- Padoli. 2016. Nursing Microbiology and Parasitology. Nursing Printed Teaching Material Module. Ministry of Health of the Republic of Indonesia. Health Human Resources Education Center, Health Human Resources Development and Empowerment Agency.
- Indonesia Health Profile 2020, p 149-150.
- Rizqiyah Riris Nur (2021). The Relationship between Community Stigma and Compliance in Taking Medicines for Pulmonary TB Patients at the Puh Jarak Health Center, Plemahan District, Kediri Regency.
- Sigalingging, IN, Hidayat, W., & Tarigan, FL 2019. The influence of knowledge, attitude, contact history and home conditions on the incidence of pulmonary TB in the working area of the Hutarakyat Health Center UPTD, Dairi Regency in 2019. Simantek Scientific Journal. vol. 3(3): 87–99
- Werdhani, R. (2019). Pathophysiology, Diagnosis and Classification of Tuberculosis. University of Indonesia.
- Widiyanto, A. (2017). The Relationship between Medication Compliance and Recovery of Pulmonary Tuberculosis Patients with Positive BTA at Delanggu Health Center, Klaten Regency. Interest: Journal of Health Sciences, 6(1), 7–12.
- World Health Organization. (2021). Global Tuberculosis Report 2021. 14 October.