Factors Affecting Compliance with Taking Anti-Tuberculosis Drugs in Tuberculosis Patients at Wamena Regional General Hospital Jayawijaya Regency

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Abstract

Tuberculosis (TB) is a direct infectious disease that is a global health problem. In 2017 Indonesia was ranked 7th in the world in cases of drug-resistant TB with 23,000 cases, while the notification rate of TB cases in Papua in 2019 was 355 per 100,000 population, and the success rate of TB treatment in Papua was 68%. Wamena Hospital medic record data from January to May 2021 there were 60 cases of TB, with the number of cases of TB category 1 as many as 56 people, TB category 2 as many as 4 people and drug resistant TB as many as 6 people. The success of treatment in TB patients is supported by adherence in taking Anti-Tuberculosis Drugs (OAT) with a predetermined dose. Non-compliance with treatment will result in high rates of treatment failure of people with pulmonary TB, considering pulmonary TB is an infectious disease, it is important to know the factors that affect compliance in oat treatment in people with pulmonary TB. Samples in the study used non probability sampling (random sampling) with purposive sampling technique with the number of study samples as many as 37 people. The results of the study obtained from 37 respondents are known as many as 68% of respondents have good family support, as many as 54% of respondents have a long distance from Wamena Hospital, as many as 70% of respondents obediently take anti-tuberculosis drugs. The results of the analysis showed there was a navigable relationship between family support, home distance, last education and adherence to taking anti-tuberculosis drugs.

Keywords: Compliance; Anti-tuberculosis drugs; Factors; Wamena; Papua

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Introduction

Tuberculosis (TB) is a public health problem that is a global challenge, where pulmonary TB disease is a direct infectious disease caused by *Mycobacterium tuberculosis*. Transmission of this disease occurs when a person inhales droplet nuclei (sputum splashes) that enter through the mouth or nose, upper respiratory tract and bronchi until it reaches the alveoli of the lungs and can also attack other organs.

Globally in 2016 there were 10.4 million TB incidents, equivalent to 120 cases per 100,000 populations. The five countries with the highest incidence of cases are India, Indonesia, China, the Philippines, and Pakistan. Indonesia's tuberculosis incidence rate in 2018 was 316 per 100,000 populations and the mortality rate of tuberculosis sufferers in 40 per 100,000 populations, with the success of the treatment in 2019 at 86%. In 2017 Indonesia was ranked 7th in the world in cases of drug-resistant TB with 23,000 cases, while the notification rate of TB cases in Papua in 2019 was 355 per 100,000 population, and the success rate of TB treatment in Papua was 68%.

In 2020 in Jayawijaya Regency there were 423 cases of TB, with category 1 TB cases as many as 414, the number of Category 2 TB cases as many as 9 people consisting of relapsed TB cases as many as 6 people, and TB cases failed to treat 3 people. The success rate of pulmonary TB treatment in Jayawijaya regency is 71%. Wamena Hospital medic record data from January to May 2021 there were 60 cases of TB. With the number of cases of TB category 1 as many as 56 people, TB category 2 as many as 4 people and drug resistant TB as many as 6 people.

One of the programs that have been run by the government in the management of tuberculosis is by means of treatment, in addition to the treatment provided. The success of a TB treatment is supported by adherence in taking anti-tuberculosis drugs, with a predetermined dose. TB patients who are treated repeatedly in the hospital are often caused by non-compliance with taking anti-

tuberculosis drugs regularly. This will certainly have the impact of dropout, which is one of the causes of failure in treatment and has the potential to increase the possibility of drug resistance. Such resistant patients will be a source of transmission of resistant germs in the community; this will certainly complicate the eradication of pulmonary TB disease in Indonesia and aggravate the burden of the government.

Considering pulmonary TB is an infectious disease, it is important to know the factors that affect compliance in oat treatment in people with pulmonary TB. The lack of a picture of this in Wamena Hospital makes researchers interested in conducting an analysis of "Factors that affect the compliance of taking Anti-Tuberculosis Drugs in TB patients in Wamena Hospital Jayawijaya regency.

The purpose of the study was to get an overview of the factors that affect the compliance of taking anti-tuberculosis drugs in TB patients at Wamena Hospital in Jayawijaya Regency. The results of the study are expected to be useful for hospitals in knowing what factors affect oat drinking compliance so that health promotion can be done as one of the nurses' efforts in improving treatment compliance in patients.

Materials and Methods

The type of research used is analytical survey research with the Cross Sectional Method, each research subject is observed only once and measurements are made on the character status or variables of the subject at the time of examination. This does not mean that all of the study subjects were observed at the same time. The research was conducted at Wamena Hospital in Jayawijaya Regency in November 2021. The population in this study was all 1 catalytic TB patients who sought road treatment at Wamena Hospital. The samples in this study were those that met the criteria for inclusion and exclusion. Sampling technique uses non-probability sampling method (random sampling) with purposive sampling technique, where the number of samples in this studies as many as 37 people.

The variables in this study consisted of independent variables, namely family support, home distance from hospital, and last education. While dependent is the compliance of TB patients in taking Anti-Tuberculosis Drugs (ATD). Family support is the involvement of the family in accompanying and paying attention to patients during the treatment period with assessment criteria including always, often, rarely, never. The distance of the patient's home with Wamena Hospital with assessment criteria is close if the distance of the patient's home with Wamena Hospital <5 km and long if the distance of the patient's home with Wamena Hospital >5 km. The last education is the last formal education that has been completed by the sufferer, with the criteria of Endah if the last education is junior high school down and higher when the last education is high school and above. ATD drinking compliance is a positive p behavior carried out by patients in carrying out treatment on the advice carried out by health workers, with the criteria if the patient always arrives on time in taking the drug, in accordance with the advice of health workers and does not comply if the patient is ever 1 day late in taking ATD from the time specified by nurses.

The type of data in this study in the form of primary data is the characteristics of respondents, family support, and last education and secondary data obtained from health agencies such as district health services, and Wamena Hospital. In this study the secondary data is the compliance data of TB patients taking ATD seen from the TB form 02 patients.

Results and Discussion

Univariate analysis was conducted to determine the frequency distribution as well as dependent variables and independent variables in this study, namely family support, home distance, last education and patient adherence to take anti-tuberculosis drugs.

The distribution of patients based on family support was obtained from 37 respondents, who had good family support as much as 68% and who had poor family support as much as 32%. The distribution of respondents based on home distance was obtained from 37 respondents, who had a long distance from Wamena Hospital at 54% and who had a close house distance from Wamena Hospital as much as 46%. The distribution of respondents based on the last education was obtained from 37 respondents who had higher education as much as 49% and who had a low education as much as 51%. The distribution of respondents based on compliance with taking anti-tuberculosis drugs was obtained from 37 respondents who obediently took anti-TB drugs, namely 70% and 30% did not comply with taking anti-TB drugs.

Bivariate analysis to test the relationship between independent variables and dependent variables used the Chi-square test. The results of the analysis are as follows:

Table 1 showed that of the 25 respondents, who had good family support, there were 24 respondents obediently taking anti-tuberculosis drugs and 1 respondent was not compliant in taking anti-tuberculosis drugs. While of the 12 respondents who had poor family support, 2 respondents were obedient in taking anti-tuberculosis drugs and 10 respondents did not obediently take anti-tuberculosis drugs.

Based on the results of the chi-square test obtained a probability value of ρ 0.000 <0.05 then H_0 in reject means there is a significant relationship between family support and compliance with taking anti-tuberculosis drugs.

Family support is help that can be given to the family in the form of goods, services, information and advice, which makes the recipient of support will feel loved, appreciated, and peaceful. People who live in a supportive environment, the condition is much better than those who do not have a supportive environment, where in this case, it is very important for lung TB patients to be in a family environment that supports their health, so that patients will always be monitored for their health.

Family support refers to support that is viewed by family members as accessible or held for the family (support can be used or not used, but family members consider that supportive people are always ready to provide help and assistance if needed). Family support is needed in determining treatment compliance, if family support is provided to pulmonary TB patients it will motivate the patient to be obedient in his treatment and take the medicine that has been given by health workers.

Table 2 showed that out of 20 respondents who had a close

Table 1: Relationship of home distance from Wamena Hospital with adherence to taking anti-tuberculosis drugs.

| Family support | Compliance with Taking Anti-Tuberculosis Drugs | | Total |
	Obedient	Disobedient	
Good	24	1	25
Bad	2	10	12
Total	26	11	37

Table 2: Family support relationship with adherence to taking anti-tuberculosis medication.

Distance of the house	Compliance with Taking Anti-Tuberculosis Drugs		Total
	Obedient	Disobedient	
Near	19	1	20
Far	7	10	17
Total	26	11	37

Table 3: Last educational link with adherence to taking anti-tuberculosis drugs.

The last education	Compliance with Taking Anti-Tuberculosis Drugs		Total
	Obedient	Disobedient	
Low	16	2	18
Tall	10	9	19
Total	26	11	37

home distance to Wamena Hospital, there were 19 respondents who obediently took anti-tuberculosis drugs and 1 respondent who did not obediently take anti-tuberculosis drugs. While of the 17 respondents who had a long distance from Wamena Hospital there were 7 respondents who obediently took anti-tuberculosis drugs and 10 respondents did not obediently take anti-tuberculosis drugs.

Based on the results of the chi-square test obtained a probability value of ρ 0.001 <0.05 means that there is a significant relationship between the distance of the house from Wamena Hospital and the compliance of taking anti-tuberculosis drugs.

Compliance in taking OAT is very important in the healing process of Pulmonary TB disease, because only by taking drugs regularly and obediently, lung TB sufferers will recover completely. Compliance occurs when the rules of using prescribed drugs and giving them are followed correctly. There are several things that cause sufferers to stop taking drugs including: 1) There is boredom caused by treatment for so long, 2) Already feel healthy after getting treatment some time ago stopped treatment, 3) The patient's awareness is still lacking due to lack of knowledge about pulmonary tuberculosis, and 4) The distance is too far between the patient's home and the health care.

The distance of TB sufferers' homes is affected by the availability of transportation access to the nearest service place. The results of this study are in line with research conducted by Nandang Tisna (2019) that the further distance the family head's house to the health service place, the less the use of health services. Ease of access to health facilities is very possible for someone to take advantage of it. This is also stated by Notoadmojo (2018) in the explanation of healthy perception and pain, where it is said that every person who is sick will find treatment to a place that is considered to be able to provide treatment so that it can achieve healing for the pain he suffered.

Table 3 showed that of the 18 respondents who had a low last education, there were 16 respondents' obediently taking anti-tuberculosis drugs and 2 respondents did not obediently take anti-tuberculosis drugs. While of the 19 respondents who had the last higher education, there were 10 respondents obediently taking anti-tuberculosis drugs and 9 respondents did not obediently take anti-tuberculosis drugs.

Based on the results of the chi-square test obtained a probability value of ρ 0.029 <0.05 means that there is a significant relationship between the last education and the compliance of taking anti-tuberculosis drugs.

A person's level of education can affect his or her level of understanding of information gleaned from various sources. The higher one's level of education is the better one's understanding and knowledge. TB sufferers with high education should be able to understand the disease better than patients with less education, so there is more awareness to be obedient in following treatment.

According to Setyowati (2019) said that the level of education of TB patients will affect their level of knowledge and absorption in terms of prevention of transmission and treatment of TB. Patients who have a less knowledge level will tend not to do treatment because for him to do treatment and not seek treatment will be the same result [1-6].

Conclusions and Suggestions

Based on the results of the data analysis and the description of the discussion above, the authors drew the following conclusions: from 37 respondents, who have good family support as many as 25 people (68%) and who have poor family support as many as 12 people (32%). Of the 37 respondents, those who had a long distance from Wamena Hospital were 20 people (54%) and those who had a close house distance from Wamena Hospital as many as 17 people (46%). Of the 37 respondents who had a higher education level of 18 people (49%) and who had a low education as many as 19 people (51%). There is a significant relationship between family support, distance from Wamena Hospital, and last education with compliance with taking anti-tuberculosis drugs.

From the results of this study, it is expected that health workers can better educate patients about the dangers of dropping out TB drugs, so that patients further improve adherence to taking drugs, and health workers so that when providing explanations to patients using simple language so that they can be well understood by patients.

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