

**ANALYSIS OF TREATMENT COMPLIANCE WITH TUBERCULOSIS (TB)  
PATIENTS IN TB MANAGEMENT PROGRAM IN JOHAN PAHLAWAN  
PUSKESMAS, ACEH BARAT REGENCY**

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**ABSTRACT**

*Tuberculosis is a chronic infectious disease caused by the bacterium Mycobacterium tuberculosis. Johan Pahlawan Puskesmas is the Puskesmas with the most TB cases compared to other Puskesmas based on the results of TB data reports from the West Aceh Health Office. There were 35 patients being treated based on 314 suspected cases reported from the Johan Pahlawan Health Center. The type of research used in this research is descriptive qualitative. In this study, the selection of informants was carried out using a purposive sampling method with a total of 5 informants. The data collection method in this research is by conducting in-depth interviews. The results of the study were determined based on several categories which were summarized from the results of in-depth interviews, some of these categories were formed into four themes, namely duration of TB treatment, knowledge about TB, presence of drug-taking supervisors and barriers to treatment. Researchers suggest to the health service unit to form a team of extension workers in providing education to the public, to health workers to be more proactive in monitoring the role of the Drug Swallowing Supervisor and patient regularity, and making agreements with patients to complete treatment.*

**Keywords:** *Tuberculosis, Compliance, Treatment*

**1. INTRODUCTION**

Tuberculosis (TB) is a chronic infectious disease caused by the bacterium Mycobacterium tuberculosis. These bacteria are rod-shaped and acid-fast, so they are often known as acid-fast bacilli. Most TB germs are often found to infect the lung parenchyma and cause pulmonary TB, but these bacteria also have the ability to infect other body organs (extra-pulmonary TB) such as the pleura, lymph nodes, bones, and other extra-pulmonary organs (Ministry of Health of the Republic of Indonesia, 2019).

According to the World Health Organization (WHO) report in 2018, tuberculosis was designated as the 10th leading cause of death in the world with an estimated number of cases reaching 1.3 million patients. Indonesia itself is a country that has the largest burden of tuberculosis out of 8 countries, namely India (27%), China (9%), Indonesia (8%), Philippines (6%), Pakistan (5%), Nigeria (4%), Bangladesh (4%) and South Africa (3%). The death rate for pulmonary TB will be higher if TB patients do not comply with treatment or drop out of treatment. Another impact will cause tuberculosis bacteria immunity to Anti Tuberculosis Drugs or called Multi Drug Resistant (MDR). MDR is a patient who has received treatment and has stopped treatment for 2 months or more. Dropping out of treatment will be a problem for individuals and society, because it can cause an increase in transmission, resistance, and even mortality (Heck, 2011).

According to data from the Aceh Provincial Health Office, in 2020 the percentage of people suspected of tuberculosis receiving services according to standards in Aceh was 32.69%, with the number of suspected TB cases being 28,091 cases. The number of TB cases in Aceh in 2020 was found to be 6,456 cases, the number of cases decreased when compared to 2019 which was 8,647 cases. The TB success rate in Aceh reaches a percentage of 85%. The World Health Organization (WHO) National Guideline for Tuberculosis Control in Indonesia targets a treatment success rate to be >85% by recommending DOTS (*Directly Observed Treatment Short Course*) since 1991 and was only implemented in Indonesia in 1995. DOTS is the most effective strategy to treat TB patients

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today. DOTS (*Directly Observe Treatment Short Course*) is direct supervision of short-term treatment with the obligation of every tuberculosis program manager to focus attention (*direct attention*) in an effort to find it with a microscope examination. Then every patient must be observed (*observed*) in swallowing the drug, every drug swallowed by the patient must be in front of a supervisor (Inayah, S, 2019).

Based on data from the West Aceh District Health Office in 2021 there were 193 cases of pulmonary TB found and treated, the number of cases decreased when compared to 2020 there were 261 cases of pulmonary TB found and treated. The achievement of the TB treatment success rate in West Aceh in 2020 was 85% with details of the total TB patients who recovered after treatment were 10 people (3.83%), TB patients who underwent complete treatment were 214 people (81.99%), TB patients who 13 people dropped out of treatment (4.98%) and the number of deaths due to TB was 8 people (3.07%).

The Johan Pahlawan Public Health Center is one of the Puskesmas with the most TB cases compared to other health centers in West Aceh Regency based on the results of TB case reports at the West Aceh Health Office. In the working area of the Johan Pahlawan Public Health Center in 2021 there were 35 TB patients being treated based on 314 suspected cases. In the first quarter of 2022 found 10 TB patients at the johan hero health center who received services and were treated . The success of TB treatment is determined by the patient's adherence to treatment. TB treatment is one of the most efficient efforts to prevent further spread of TB germs. Adequate TB treatment must meet the principles, namely, treatment is given in the form of appropriate OAT guidelines containing at least 4 kinds of drugs to prevent resistance, given in appropriate doses, swallowed regularly and directly supervised by PMO (Drug Swallowing Supervisor) until completion of treatment. , treatment is given in a sufficient period of time, divided into two stages, namely the initial stage and the advanced stage, as adequate treatment to prevent recurrence (Mufti'ah, W, S 2021)

This research is based on several cases that the researchers found regarding default cases of TB treatment. Data obtained from the West Aceh Health Office in 2021 found 28 patients who experienced default. Based on data from a preliminary study conducted at the Johan Pahlawan Health Center TB Poli, it was found that 5 default cases were found in 2021. The results of interviews with Wasor TB at the West Aceh Health Service and TB Poly officers at the Johan Pahlawan Health Center found that the factors that hindered adherence to TB patients were obedient to undergoing treatment. TB treatment because there is still a lack of patient perception or knowledge about TB, some patients stop treatment because of side effects from drugs so that patients are unable to continue treatment and there are still many patients who stop treatment because they feel that they have recovered after 2 months of treatment so they do not continue treatment until it is complete for 2 months. 6 months, this behavior can make germs resistant to drugs or called Multi Drug Resistant (MDR) so that patients require treatment with a longer period of time.

In line with research conducted in India, Swaziland, Thailand and Zambia showed that many TB patients experienced treatment failure because they stopped treatment after they felt their condition was better or cured and/or for 2 months of treatment (Purwaningsih, 2009), patients with discontinuing treatment due to misperceptions and low knowledge of TB patients about treatment programs with curing, as well as the presence of patients who do not know about the potential side effects of anti-tuberculosis drugs.

Based on the description above, the researcher is interested in conducting a study with the title "Analysis of Compliance with Treatment for TB Patients in the Tuberculosis (TB) Management Program at the Johan Pahlawan Health Center, West Aceh Regency ". The purpose of this study was to find out in-depth information about the compliance of TB patients in the TB control program at the Johan Pahlawan Health Center, West Aceh Regency.

## **2. IMPLEMENTATION METHOD**

The type of research used in this research is descriptive qualitative. This research was conducted at the Health Office of West Aceh Regency and the Johan Pahlawan Health Center of West Aceh Regency. The reason for choosing the location is based on the results of a preliminary study, it was

found that the level of findings for TB cases at the Johan Pahlawan Health Center in West Aceh Regency showed a fairly high number compared to several other health care places. The research was conducted from March to June 2022.

In this study, the selection of informants was carried out using a *purposive sampling method* with a total of 5 informants, including:

- 1) Informant 1 is the Person in Charge of the TB Program at the Aceh Barat Health Office
- 2) Informant 2 is Health Officer for TB Poly TB Puskesmas Johan Pahlawan
- 3) Informant 3 is a TB patient who underwent complete treatment
- 4) Informant 4 is a TB patient who stopped treatment
- 5) Informant 5 is a TB patient who is undergoing advanced treatment

The data collection method in this research is by conducting in-depth interviews. Analysis of the data used is to examine all available data from the results of interviews by reducing the data in a summary so that it is easy to read and understand.

### 3. RESULTS AND DISCUSSION

The results of this study were determined based on several categories which were summarized from the results of interviews in depth with 5 informants so that from these several categories formed into four themes as follows:

#### Theme 1: Duration of TB Treatment

The treatment phase carried out by TB patients is still not optimal. Some TB patients do not comply with treatment or drop out of treatment after undergoing intensive or early stage treatment. This can be seen from the statements of the informants below:

**Informant 1:** *"... if the duration of treatment for ordinary TB or SO TB is for 6 months, it is further divided into 2 stages, there is an initial stage for 2 months there, usually patients are re-evaluated on average after 2 months of treatment, many patients stop seek treatment because he feels that he has recovered, because the symptoms of TB have disappeared even though he cannot be said to have recovered because the TB germs are still there..."*

**Informant 4:** *"...I took a month of treatment, after the red medicine finished, the cough was cured because the medicine had run out, what else are we taking medicine for, the red mop is just like this. Because I don't have a cough anymore, why should we drink again, unless I have a cough again, I'm not there anymore, I'm cured now..."*

From the results of interviews with informants 1 and 4, it can be concluded that patients who have undergone treatment for one or two months will feel changes in their body condition so that the patient assumes that he has recovered from his illness even though the patient has not undergone complete treatment. This can cause TB germs to become resistant, it is necessary for health workers to monitor and evaluate patients and provide education about the duration of TB treatment which must be carried out for approximately 6 months in a row by taking drugs regularly.

Based on the results of the interview with informant 2, he said the same thing as the statement of informant 1, namely one of the factors that TB patients did not comply or did not continue treatment because the condition felt by the patient after undergoing treatment for 2 months had experienced changes such as TB symptoms that were felt to have disappeared. While the results of interviews with informant 3 stated that they had undergone treatment completely for 6 months and had been declared cured by the doctor, and informant 5 stated that they were still undergoing advanced treatment and the drugs given were yellow in color, different from the drugs given at the initial stage of treatment, which were colored yellow. red.

According to Farhanisa (2015) the length of treatment in TB patients Category 1 there are 2 stages of treatment, namely the intensive stage which is carried out for 2 months and the

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advanced stage which is carried out for 4 months. According to Nugroho (2011) treatment duration of more than 2 months can result in patients dropping out from TB treatment because after doing the intensive stage of treatment, the patient usually feels healed and stops the treatment.

TB treatment takes longer than treating other bacterial infections. Ruswanto (2010) said that the regularity of treatment in TB disease aims to cure patients from their disease, besides that, the frequency and time for treatment and the type of drugs that are taken must also be considered, this is due to educational factors and minimal knowledge of patients regarding TB treatment stage.

**Theme 2: Knowledge about TB**

There is still a lack of knowledge of patients undergoing TB treatment. Some of the informants' statements that support the patient's lack of understanding about TB disease are as follows:

**Informant 2:** *"...so most of these patients only know briefly about TB because the average person who comes here is in the lower economic level, maybe because of their low level of education, because usually those with high levels of education will understand better. . Many who come here, on average, have graduated from high school, middle school, elementary school, and some even don't go to school. So maybe this is one of the factors that the patient does not want to do the examination..."*

**Informant 5:** *"... lung disease due to smoking, many staying up late at night. Can be transmitted to other people. Symptoms include shortness of breath, coughing and wheezing when breathing..."*

Based on the results of interviews with several informants, it was found that the patient's knowledge of TB disease is still low, so it can be concluded that the lower one's knowledge, the lower one's adherence to TB treatment. This is because a person does not get more in-depth information about TB so that it can affect the level of adherence. Knowledge of the stages of TB treatment is very important for the success of TB treatment because it can provide information about the stages of treatment that must be taken and the goals of treatment at each stage of treatment.

Research Sari, (2016) found that respondents with sufficient knowledge had a greater level of compliance than respondents with less knowledge. In Sitanggang's, (2012) research found that there is a significant relationship between the knowledge factor and medication adherence. In line with Yeti, A, (2017) research, TB patients with good knowledge had a proportion of adherence 12,857 times more obedient in TB treatment. So it can be concluded that there is a significant relationship between the knowledge of Tuberculosis patients and adherence to treatment at Panti Waluya Sawahan Hospital, Malang.

According to Fairawan, (2009), limited knowledge about TB can make this disease often not handled properly. So to open up insight about the prevention and treatment of TB, it is necessary to conduct health education or counseling from health service centers such as Puskesmas so that patients can know about the concept of TB disease and can break the chain of transmission of the disease. In addition, doctors are also obliged to provide education to patients as patients have the right to get a complete explanation of medical actions.

**Theme 3: Presence of Drug Swallowing Supervisor**

To ensure regularity of treatment, it is necessary to have a drug swallowing supervisor who is in charge of supervising TB patients to take medication regularly until they are finished, encouraging patients to seek regular treatment, reminding patients to re-examine sputum, and providing family education about TB disease. The existence of a drug swallowing supervisor is very important to accompany patients while undergoing treatment, so a supervisor must know his function and role as a drug swallowing supervisor.



**Informant 1:** *"...there are patients who are still not obedient even though there are supervisors, because on average the supervisors are from the patient's family. Depending, it could be that the supervisor is lazy to remind the patient or forgets. Especially if the level of education is low, it's also difficult sometimes because he doesn't know what his role as a supervisor is for..."*

**Informant 3:** *"...if I am the mother who reminds me to take medicine, but sometimes I forget to remind myself so I have to remember it myself. The nurse chose it because when I was there, I went with my mother, so sometimes my mother chose me as the supervisor for swallowing the medicine..."*

Based on the results of interviews with several informants, it was found that the drug swallowing supervisor did not supervise and remind the patient to take medication for reasons of forgetfulness and some supervisors did not know the function and role as a drug swallowing supervisor. Therefore, the selection of a drug swallowing supervisor must be someone who has a good education so that they pay more attention to the health development of TB patients by understanding their role as a drug swallowing supervisor.

According to Hapsari, (2010) collaboration between health workers and families appointed to assist when patients take medication, is also a factor that needs to be evaluated to determine the level of success of treatment. Murtiwi's, (2006) research found that not all supervisors of swallowing drugs carried out their functions correctly, namely reminding TB patients to take medication every day. Actually, according to DOTS, direct observation is required, namely to see for sure that the patient has taken the drug. In accordance with the TB disease eradication program, it is better for health workers to be supervisors of swallowing drugs, but the findings of this study are only 0.6% who are supervisors of swallowing drugs by health workers.

The results of Pranoto's, (2017) research show that the presence of a drug ingestion supervisor is very important and needed in the management of TB with the DOTS strategy. To overcome the barriers of TB patients requires a supervisor to swallow the ideal drug. According to respondents, the ideal drug swallow supervisor is someone who is close to TB sufferers, has patience, has compassion for TB sufferers, has sufficient knowledge about TB and has good communication skills.

#### **Theme 4: Barriers to Treatment**

The obstacles or barriers for TB patients in taking treatment are quite varied. This can be seen from the statements of the informants below:

**Informant 2:** *"...there are indeed people who often drop out of treatment, these are people who are elderly, maybe because the side effects of the medicine are more severe, there are some people who drop out of treatment when we ask, they even come back here and give them back their medicine..."*

**Informant 4:** *"...we were tired, first we had to queue and then we were told to go there, we were told to come here many times, the process took a long time there. Another obstacle might be like yesterday, there was no vehicle so I haven't taken the medicine yet, then I'm working so sometimes I don't have time to get there..."*

The results above show that the perceived side effects of drugs are one of the strong reasons for patients to decide to stop or default in TB treatment, in addition to other obstacles that make patients non-adherent to treatment, namely long queue times at the Puskesmas, patients cannot take drugs for reasons no vehicle and no time to earn money or work.

In line with Nugroho's (2011) research, it was found that those that hindered the informants from taking TB treatment, namely feeling healthy, long queues at BP4, unable to take drugs for work reasons, perceived side effects of drugs, feeling lazy because the distance to BP4 was far, medical expenses, and drop out of treatment due to moving out of town.

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#### 4. CONCLUSION

From the results of the study, it can be concluded that: 1) the length of treatment that has gone through the intensive stage can make the patient feel that he has recovered because the symptoms of TB have disappeared so that the patient is no longer taking the drug completely, 2) the lower one's knowledge, the lower one's adherence to conduct examinations and undergo TB treatment, 3) the selection of a drug swallowing supervisor must be someone who has a good education in order to understand his role as a drug swallowing supervisor, 4) patient barriers to treatment are due to perceived drug side effects, long queue times at the Puskesmas, patients can not take drugs because of reasons of no vehicle and no time due to work reasons, so patients feel the obstacles outweigh the benefits of treatment.

#### 5. SUGGESTION

Based on the results of the study, suggestions that can be given are: 1) for health service units to form a team of extension workers as an effort to provide education to the public about TB, 2) for health workers to be more proactive in monitoring the role of supervisors in swallowing drugs and the regularity of TB patients in complete treatment, 3) make an agreement with the patient so that the patient will undergo treatment to completion.

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