Journal of Public Health Science (JoPHS)
Volume 3, No 2 – Juni 2026
e-ISSN :3047-3632

ANALYSIS OF THE SUCCESS OF TUBERCULOSIS TREATMENT THROUGH THE DOTS (DIRECTLY OBSERVED TREATMENT SHORTCOURSE) APPROACH AT THESANGURARA PUBLIC HEALTH CENTER IN PALU CITY

Muhammad Rizki Ashari[1*] , Vidyanto[1], Novi Inriyanny Suwendro[1],Miftahul Haerati Sulaiman[1],Nur Mila Sari[1], Thifami Andeline Kaiya[1]
[1] Departmen of Health Administration and policy, Faculty of Public Health, Tadulako University
Author's Email Correspondence (*): Aiiyrizki@yahoo.com

Received: 06-06-2026	Revised: 20-06-2026	Approved: 28-06-2026

ABSTRACT

Tuberculosis disease is still a serious global public health problem characterized by high incidence, morbidity, and mortality that requires special attention and ongoing intervention from various parties. Therefore, the implementation of the Directly Observed Treatment Shortcourse (DOTS) strategy is one of the efforts to control TB that has proven to be effective globally in overcoming the problem of tuberculosis disease. The Sangurara Health Center Working Area has a high incidence of TB cases and there are still challenges in achieving optimal treatment success. Of the 13 existing health centers, Sangurara Health Center is the health center with the highest number of TB cases in Palu City. This condition shows the importance of identifying specific factors that can affect the success of the TB program in this Working Area. This study aims to analyze the relationship between treatment regularity, knowledge of tuberculosis and DOTS, and the role of PMO with treatment success. This type of research is quantitative with an analytical survey design and a cross-sectional approach. The population in this study is all TB patients who have successfully treated or failed in 2023 in the Sangurara Health Center Working Area of 53 people, with questionnaires as a data collection instrument. The results showed that the variables of regularity of treatment (p = 0.000), knowledge of TB and DOTS (p = 0.000), and the role of PMO (p = 0.000) had a significant relationship with the success of treatment of TB patients. The conclusion of this study is that the Directly Observed Treatment Shortcourse Strategy has a significant relationship with the Success of Treatment of Tuberculosis Patients in the Working Area of the Sangurara Health Center, Palu City.

***Keywords**: DOTS; Health center* ; Drug Drinking Supervisor ; Regularity Treatment.

INTRODUCTION

Tuberculosis (TB) is a disease caused by the bacteria Mycobacterium tuberculosis which in most people can infect the lungs, and can also infect almost all organs of the body such as the brain, spine, and kidneys. This disease can be transmitted through sputum droplets when the patient coughs or sneezes. Therefore, if the disease is not treated immediately, it will result in death (Qhumairah *et al*., 2024).

According to the WHO Global Tuberculosis Report 2024, Indonesia ranks second among countries with the highest TB burden, with an estimated more than 1 million incident TB cases in 2023. National data from the Ministry of Health also show that West Java recorded the highest number of TB cases, followed by East Java and DKI Jakarta, while Central Sulawesi ranked ninth with 4,119 reported cases (WHO, 2024). According to the WHO Global TB Report 2022, Indonesia ranks

second after India with a total of 824 thousand annual cases and causes around 93 thousand deaths per year. In Indonesia, the highest number of TB cases in a row is West Java with 55,179 cases, followed by East Java with 50,346 cases, then DKI Jakarta with 41,556 cases and Central Sulawesi is in 9th place with 4,119 cases (Kementerian Kesehatan, 2023).

Data from the Health Office of Palu City, 1,600 tuberculosis cases were reported in Palu City in 2023, indicating a substantial disease burden that requires strengthened tuberculosis control efforts (Dinkes Sulawesi Tengah, 2023) .Of the 13 existing health centers, Sangurara Health Center is the health center with the highest number of TB cases in Palu City. Based on data from the Sangurara Health Center, 62 tuberculosis cases were recorded in 2023, making Sangurara Health Center the facility with the highest number of TB cases in Palu City and serving as the study site.

Since 1995, the World Health Organization (WHO) has recommended Directly Observed Treatment Shortcourse (DOTS) as the main strategy in tuberculosis disease control efforts, which aims to improve the effectiveness and efficiency of basic health services. The implementation of the DOTS Strategy in several countries has been proven effective in reducing infections and deaths from tuberculosis with its main focus on finding and curing patients to break the chain of transmission, thus reducing the incidence of tuberculosis in the community (Sasmita *et al*., 2024).

The DOTS (Directly Observed Treatment Shortcourse) strategy is a direct supervision of short-term treatment with the obligation of every tuberculosis program manager to focus attention (direct attention) in an effort to find patients with microscope examination. Then each patient must be observed in swallowing the medicine, every medicine swallowed by the patient must be in front of a supervisor. Patients must also receive treatment that is organized in a system of management, distribution with sufficient supply of drugs, then each patient must receive good medicine, meaning standard short course treatment that has been clinically proven to be effective (Saragi *et al*., 2024).

In accordance with Permenkes RI No. 67 of 2016, the main indicator of the success of the TB treatment program is the success rate or treatment success with the national target that must be achieved is at least 85% of patients recovering and 90% of patients completing treatment. The success of treatment can be seen from the patient's compliance in taking OAT which is monitored directly by the Drug Drinking Supervisor (PMO), and a good understanding of TB. In addition, treatment is said to be successful if the patient is cured with negative sputum conversion and the patient is regular and compliant with treatment (Inaya *et al*., 2020).

However, in reality, the success rate of TB treatment in Central Sulawesi each year has not met this target. Based on the Central Sulawesi Provincial Health Office Profile, the tuberculosis treatment success rate in 2023 was 86%, which remained below the national target.Some of the obstacles that cause the success rate of TB treatment has not reached the target are patients who have completed treatment have not been reported to SITB (Tuberculosis Information System), no microscopic examination for follow-up, limited availability of microscopes, cases moved without

explanation, a very long treatment period, the presence of drug side effects causing patients to stop treatment unilaterally. (Dinkes Sulawesi Tengah, 2023)

According to Rumimpunu *et al* (2018), Patients' irregularity in taking OAT is a major factor in treatment failure. Based on interviews with the person in charge of TB at Sangurara Health Center, it is known that there are still many patients who ignore the regularity of taking medicine. This is evident from the discrepancy between the amount of medicine left at the patient's house and the amount that should be if the patient regularly takes the medicine. If this habit continues, the effectiveness of OAT will decrease and TB bacteria can mutate to become resistant to the drugs used. Therefore, the regularity of patient treatment is crucial to determine the success of treatment. (Dwiningrum *et al*., 2021)

According to Wiyati & Nabilla (2024), The level of patient knowledge greatly affects the success of TB treatment. Lack of knowledge can cause patients to refuse treatment, patients are reluctant to attend meetings with health workers, and even ignore health workers' recommendations. Based on interviews conducted with the person in charge of TB at the Sangurara Health Center, it is known that there is still a negative stigma among TB patients including the discrimination they experience, even some of the patients stop treatment (drop out) with the assumption that they have recovered without checking and confirming from health workers.

In addition, Kementerian Kesehatan (2011), suggests that the success of treatment in TB patients is also influenced by the role of drug supervisors (PMOs) to ensure the regularity and persistence of patients in taking OAT and making regular visits to health services. Based on the results of interviews with the person in charge of TB at the Sangurara Health Center, revealed that the role of PMO has not been carried out optimally. This is evidenced by some of the patients who do not regularly take medication during the treatment period which will have an impact on treatment failure.

The success of tuberculosis treatment is influenced not only by clinical management but also by patients' health-related behaviors. According to health behavior theory, particularly the Health Belief Model, adherence to long-term treatment is determined by patients' knowledge and perceptions of the disease, perceived benefits of treatment, and reinforcing factors such as support from health workers and medication supervisors (PMOs). Within the DOTS strategy, these behavioral determinants are reflected in patients' regularity in taking anti-tuberculosis medication, adequate knowledge of tuberculosis and its treatment, and the active role of PMOs in supervising treatment. Strengthening these components is expected to improve treatment adherence, prevent treatment interruption and drug resistance, and ultimately increase treatment success.

Therefore, this study aimed to determine the relationship between the implementation of the Directly Observed Treatment Short-course (DOTS) strategy—represented by treatment regularity, patients' knowledge of tuberculosis, and the role of medication supervisors (PMOs)—and the successful treatment of tuberculosis patients in the Sangurara Health Center Working Area, Palu City.

METHOD

This study was an analytical quantitative study using a cross-sectional design conducted in the Sangurara Health Center Working Area from April 5 to May 5, 2025. The study population comprised all tuberculosis (TB) patients who were registered and had documented treatment outcomes in 2023 at the Sangurara Health Center. Treatment outcomes were classified as successful (patients declared cured and those who completed treatment) and unsuccessful (patients who failed treatment or did not complete treatment). A total of 53 eligible patients were included using a total sampling technique.

Data were collected retrospectively by reviewing patients' medical records and the Tuberculosis Information System (SITB) to obtain treatment outcome data, and were complemented by structured questionnaires administered to respondents to assess the implementation of the Directly Observed Treatment Short-course (DOTS) strategy. To minimize recall bias, only patients with documented treatment records were included, questionnaire items were limited to variables that could reasonably be recalled by respondents, interview responses were cross-checked with medical records whenever possible, and interviews were conducted using a standardized questionnaire by trained data collectors.

Data processing included editing, coding, data entry, and data verification to ensure data accuracy and completeness. Data analysis consisted of univariate analysis to describe the demographic and clinical characteristics of TB patients and bivariate analysis using the chi-square test to evaluate the association between the implementation of the Directly Observed Treatment Short-course (DOTS) strategy and treatment success among TB patients in the Sangurara Health Center Working Area, Palu City, with a significance level of 5% ($p < 0.05$).

RESULT

Univariate Analysis

Table 1
Frequency Distribution of Characteristics Based onGender of TB patients in the Sangurara Health Center Working Are in 2023

Gender	n	%
Male	36	67,9
Female	17	32,1
Total	53	100,0

It is known that the frequency distribution of the sex of respondents out of 53 respondents in the Sangurara Health Center Working Area in 2023 was found that more respondents suffered from TB in the male gender as many as 36 respondents (67.9%) compared to female respondents as many as 17 respondents (32.1%).

Table 2
Frequency Distribution of Characteristics Based on Age of TB patients in the Sangurara Health Center Working Area in 2023

Age	f	%
20-29	15	28,3
30-39	9	17,0
40-49	6	11,3
50-59	12	22,6
60-69	4	7,5
70-79	7	13,2
Total	**53**	**100,0**

It is known that the frequency distribution of the age of respondents out of 53 respondents in the Sangurara Health Center Working Area in 2023 respondents who suffered from TB disease mostly occurred in the age group 20-29 years had the highest number of 15 respondents (28.3%), while in the age group 60-69 years had the lowest number of 4 respondents (7.5%).

Table 3
Frequency Distribution of Characteristics Based on the Address of TB patients in the Sangurara Health Center Working Area in 2023

Village	n	%
Donggala Kodi	14	26,4
Duyu	13	26,4
Balaroa	11	20,8
Boyaoge	8	15,1
Nunu	6	11,3
Total	**53**	**100,0**

It is known that the frequency distribution of respondents' addresses out of 53 respondents in the Sangurara Health Center Working Area in 2023, many respondents suffered from TB in Donggala Kodi village, namely 14 respondents (26.4%), while Nunu village had the lowest number, namely 6 respondents (11.3%).

Table 4
Frequency Distribution of Characteristics Based on the occupation of TB patients in the Sangurara Health Center Working Area in 2023

Occupation	n	%
Karyawan Swasta	13	24,5
Pelajar/Mahasiswa	10	18,9
Tidak Bekerja	9	17,0
PNS/Polri/TNI	9	17,0
IRT	8	15,1

Wiraswasta	4	7,5
Total	53	100,0

It is known that the frequency distribution of respondents' occupations of 53 respondents in the Sangurara Health Center Working Area in 2023, respondents who suffered a lot of TB occurred in respondents with employment status, namely private employees as many as 13 respondents (24.5%) and the lowest employment status was self-employed as many as 4 respondents (7.5%).

Table 5
Frequency Distribution of Characteristics Based on Treatment Regularity in the Sangurara Health Center Working Area in 2023

Regularity of Treatment	n	%
Tidak Teratur	20	37.7
Teratur	33	62.3
Total	**53**	**100.0**

It is known that the frequency distribution of treatment regularity in TB treatment of 53 respondents in the Sangurara Health Center Working Area in 2023, respondents who have regularity in treatment are 33 respondents (62.3%).

Table 6
Frequency Distribution of Characteristics Based on Knowledge about TB and DOTS in the Sangurara Health Center Working Area in 2023

Knowledge of TB and DOTS	n	%
Poor	22	41.5
Good	31	58.5
Total	**53**	**100.0**

It is known that the frequency distribution of knowledge about TB and DOTS in the treatment of TB from 53 respondents in the Sangurara Health Center Working Area in 2023, respondents who have good knowledge in treatment are 31 respondents (58.5%).

Table 7
Frequency Distribution of Characteristics Based on Knowledge about TB and DOTS in the Sangurara Health Center Working Area in 2023

Role of medication supervisor (PMO)	n	%
Less than Optimal	18	34.0
Optimal	35	66.0
Total	**53**	**100.0**

It is known that the frequency distribution of the role of drug supervisors in the treatment of tuberculosis from 53 respondents in the Sangurara Health Center Working Area in 2023, respondents who have an optimal role of drug supervisors in treatment are 35 respondents (66.0%).

Bivariat Analysis

Table 8
Relationship between Treatment Regularity and Treatment Success of TB Patients in the Working Area of Sangurara Health Center, Palu City 2023

Regularity Treatment	Treatment Success						Value *p*
	Not Successful		Successful		Total		
	n	%	n	%	n	%	
Irregular	12	60.0	8	40.0	20	100.0	0.000
Regular	3	9.1	30	90.9	33	100.0	
Total	**15**	**28.3**	**38**	**71.7**	**53**	**100.0**	

Based on the data in Table 8, it shows that there is a greater percentage of successful treatment in respondents who are regular in treatment, namely 90.9% compared to respondents who are not regular in treatment by 40.0%. The statistical test results with a value of p = 0.000 so that p <0.05, meaning that there is a relationship between treatment regularity and the success of treatment for TB patients in the Sangurara Health Center Working Area, Palu City.

Table 9
Relationship between Knowledge about TB and DOTS with the Successful Treatment of TB Patients in the Working Area of Sangurara Health Center, Palu City 2023

Knowledge about TB and DOTS	Treatment Success						Value *p*
	Not Successful		Successful		Total		
	n	%	n	%	n	%	
Kurang Baik	13	59.1	9	40.9	22	100.0	0.000
Baik	2	6.5	29	93.5	31	100.0	
Total	**15**	**28.3**	**38**	**71.7**	**53**	**100.0**	

Based on the data in Table 9, it shows that there is a greater percentage of successful treatment in respondents who have good knowledge about TB and DOTS, which is 93.5% compared to respondents who have less knowledge about TB and DOTS at 40.9%. Statistical test results with a value of p = 0.000 so that p <0.05, meaning that there is a relationship between knowledge about TB and DOTS with the sucessful treatment of TB patients in the Sangurara Health Center Working Area, Palu City..

Table 10
The relationship between the role of drug supervisors and the treatment success of TB patients in the Sangurara Health Center Working Area, Palu City 2023

Role Supervisor Taking Medication (PMO)	Treatment Success						Value *p*
	Not Successful		Successful		Total		
	n	%	n	%	n	%	
Less	13	72.2	5	27.8	18	100.0	0.000
Optimal	2	5.7	33	94.3	35	100.0	
Total	**15**	**28.3**	**38**	**71.7**	**53**	**100.0**	

Based on table 5.11 shows that there is a greater percentage of successful treatment in respondents who have an optimal role of drug supervisors, namely 94.3% compared to respondents who have a less optimal role of drug supervisors at 27.8%. Statistical test results with a value of p = 0.000 so that p <0.05, meaning that there is a relationship between the role of drug drinking supervisors with the successful treatment of TB patients in the Sangurara Health Center Working Area, Palu City.

DISCUSSION

Relationship between Treatment Regularity and Treatment Success of TB Patients

Regularity is the act of an individual consistently taking medication as directed by a health professional. Without high adherence to the schedule and dosage of drugs in TB treatment, the risk of drug resistance will increase, which in turn can lead to treatment failure and continued transmission. Therefore, treatment regularity can be seen from the extent to which TB patients take drugs and consume drugs on time according to the doctor's recommendations (Putri *et al*., 2025).

Based on research conducted at the Sangurara Health Center Working Area, Palu City, most respondents already have regularity in treatment as evidenced by the regularity of respondents in taking and taking drugs according to a predetermined schedule. This condition certainly cannot be separated from the role of all parties including health workers, PMOs and families who routinely monitor respondents' treatment during treatment, provide counseling and support to each respondent so that they are motivated to undergo regular treatment. This is in accordance with the DOTS theory, which states that treatment regularity is one of the important factors in improving TB treatment success. With treatment regularity, TB patients are more likely to complete their full treatment regimen, thereby improving treatment success.

However, there were still some respondents who stated that they experienced obstacles in following the regularity of treatment due to their daily activities which made them often forget to take medicine on time and also the side effects felt, which became the reason for respondents not to want to continue treatment.

The results of this study also show that there are still respondents who are not successful even though they are regular in treatment and vice versa there are respondents who are successful even though they are not regular in treatment. This happens because the success of treatment is also influenced by the immunity of each respondent which is different. In this study, it was found that some respondents had comorbidities such as diabetes mellitus, hypertension, and others, which could affect their immunity. These diseases have the potential to weaken the immune system, so respondents with weakened immune systems who regularly or irregularly follow the treatment regimen may affect their body's ability to fight the microbacterium tuberculosis bacteria and potentially experience treatment failure.

Based on the results of the analysis using the Chi Square test, there is a significant relationship between treatment regularity and the success of treatment for TB patients in the Sangurara Health Center Working Area, Palu City. This is because regularity of treatment allows TB patients to get the right dose of drugs and control infection and prevent drug resistance which has an impact on the success of their treatment.

The results of this study are in line with research conducted by Damayanti & Hikmah (2019) stated that there is a relationship between the regularity of treatment for TB patients and the success of treatment because the regularity of patients in taking OAT can kill TB bacteria and prevent resistance to OAT consumed. Research conducted by Depo & Pademme (2022) also stated that TB patients who do not have regularity in undergoing treatment will be an obstacle in achieving recovery.

Relationship between Knowledge of TB and DOTS with Successful Treatment of TB Patients

Knowledge is the first step in changing health behavior through education or health promotion. Through the delivery of information about healthy living, health maintenance, and disease prevention, individuals' understanding of these topics including regularity in treatment will increase. Therefore, knowledge is fundamental in shaping individual behavior (Amalia *et al*., 2021). Knowledge in this study means that respondents know about TB disease and DOTS.

Based on research conducted in the Sangurara Health Center Working Area of Palu City, most respondents already had good knowledge about TB and DOTS. This shows that previous education and health promotion efforts at Sangurara Health Center have had a positive impact on most respondents. Some respondents stated that health workers at the health center and cadres who visited to deliver drugs always provided information related to their disease and the side effects felt so that they had a good understanding that encouraged them to undergo treatment regularly. This is in line with the DOTS theory, which emphasizes the importance of TB patient education in improving adherence to treatment and ensuring successful

TB treatment. With adequate knowledge, people with TB are more likely to understand the importance of completing their treatment regimen, which ultimately contributes to higher cure rates.

However, there are still some respondents who have poor knowledge related to TB and DOTS, indicating a gap that needs to be addressed further. Based on the results of the study, respondents' lack of knowledge is related to respondents who do not understand the cause of TB disease caused by Microbacterium Tuberculosis bacteria, respondents do not understand how TB germs spread, and even some respondents think that if they feel healthy, they can stop taking medicine even though they have not finished treatment. In addition, some respondents who had poor knowledge stated that they did not know or had not heard of DOTS, they only knew the symptoms of TB disease, namely a cough experienced for more than two weeks. Some stated that every time they took medicine or met with health workers they were only represented by the PMO, so the information they got was not optimal. This suggests that health education programs need to be improved to reach every TB patient.

The lack of knowledge of TB patients about the disease and treatment steps can result in their lack of understanding of the treatment they are taking, which can affect their treatment regularity. This shows that the higher the knowledge of the respondents, the higher the chance of success in their treatment, which in turn has an impact on the high recovery rate of TB patients. However, this study found that there were still respondents who were unsuccessful despite having good knowledge about TB and DOTS. This is because the success of treatment is also influenced by the attitude and motivation of the respondents themselves. Some respondents stated that the long duration of treatment caused them to feel bored and tired and eventually decided to drop out. Therefore, even if the respondent knows but is not accompanied by great motivation to recover, the respondent will not be successful in his treatment. There were also respondents in this study who were successful despite having less knowledge about TB and DOTS, tended to have good regularity in undergoing their treatment because of the support provided by their families by reminding them to take and take medicine regularly and always accompanying and helping respondents during their treatment period. Respondents also stated that there was a change in the symptoms they felt were getting better, which became a strong motivation to continue treatment.

Based on the results of the analysis using the Chi Square test, there is a significant relationship between knowledge of TB and DOTS with the successful treatment of TB patients in the Sangurara Health Center Working Area, Palu City. This is because good knowledge about TB and DOTS not only increases respondents' understanding of the importance of treatment, but also encourages them to be more active in following the treatment program, communicating with health workers, and utilizing support from family as PMO. Thus, improved knowledge can contribute significantly to successful TB treatment.

The results of this study are in line with research conducted Silalahi *et al* (2021), shows that there is a significant relationship between knowledge factors

and the success of TB treatment in the Namorambe Puskesmas Working Area because knowledge factors can influence a person's actions or behavior in doing something including a person's treatment behavior. Research conducted Salvadila *et al* (2023), stated that when a person has sufficient knowledge about the disease and its treatment, he will try to undergo treatment properly which has an impact on the success of his treatment.

These results are not in line with research conducted Maulidya *et al* (2017), showed that there was no relationship between knowledge and the success of TB treatment at the Dinoyo Health Center because the recovery of TB patients was not influenced by knowledge if knowledge was not followed by attitude. Research conducted Papeti *et al* (2022), stated that attitude is a factor that supports the occurrence of an individual's behavior, therefore if every patient who agrees to take medicine regularly, it will increase their regularity in taking medicine.

The Relationship between the Role of Drug Taking Supervisors (PMOs) and the Successful Treatment of TB Patients

A drug swallowing officer (PMO) is a person who is assigned to help supervise, provide encouragement and motivation, and remind people with TB to take and take medicine regularly until treatment is completed. Therefore, PMOs are needed to ensure the regularity of TB patients' treatment until the end of their treatment period (Purba & Sudirman, 2024).

Based on research conducted in the Sangurara Health Center Working Area of Palu City, most of the successful respondents had an optimal PMO role. This was shown by respondents who were always reminded to take medicine according to the time determined by the PMO, always accompanying and providing support while the respondent was undergoing treatment, reminding the respondent to schedule sputum examination, and informing about the side effects of the drugs taken and helping the respondent when experiencing drug side effects. In addition, respondents also stated that their PMOs were their own family members so that they were more supportive and facilitated the supervision process. This is in accordance with the DOTS theory which states that the optimal role of PMOs in the treatment process is very important to improve the compliance of TB patients in undergoing treatment regimens. With an active and engaged PMO, patients feel more motivated and supported, which ultimately contributes to the success of TB treatment.

However, there are still some respondents who have less than optimal PMOs. Based on the results of the study, some respondents who had a less than optimal PMO role stated that the long duration of treatment without family support made them lack motivation to continue treatment, and some respondents also stated that the family appointed as PMO had other activities so that their attention was divided which had an impact on their less than optimal role as PMO. This suggests that the TB program needs to re-evaluate the determination of PMOs to intervene in the possibility of their less than optimal role as supervisors of TB patients' treatment.

The results of this study concluded that the more optimal the role of PMO, the treatment success will increase, but conversely if the role of PMO is not optimal, the

smaller the chance of treatment success. However, in this study, there were still respondents who were unsuccessful despite having an optimal PMO role. This happens because the success of treatment is also influenced by the motivation of the respondents themselves and the side effects of the drugs they feel and a less in-depth understanding of the disease and treatment that makes respondents feel they do not want to continue their treatment to completion. Respondents who succeeded despite having a less than optimal PMO role tended to have good knowledge related to their disease so that they remained compliant in their treatment. In addition, respondents have a strong motivation to recover because they have dependents to support the family.

Based on the results of the analysis using the Chi Square test, there is a significant relationship between the role of PMO and the successful treatment of TB patients in the Sangurara Health Center Working Area, Palu City. This is because the optimal role of PMOs in the treatment process by providing assistance, emotional support, and helping to overcome the side effects of treatment can increase the adherence of TB patients, which has an impact on higher cure rates..

These results are in line with research conducted by Mokambu *et al* (2023), This study shows that there is a relationship between the role of the Drug Drinking Supervisor (PMO) and Treatment Success in the Bulango Ulu Health Center Working Area because the role of PMO is very important in the patient's treatment process so that the patient is not potentially absent or dropping out of treatment. Research conducted Saida *et al* (2023), stated that patients who have an optimal PMO role during treatment will have a 0.333 times greater risk of succeeding in treatment compared to sufferers who have a less optimal PMO.

The results of this study are not in line with the research conducted (Herda *et al* (2018) The results show that there is no significant influence between the role of drug supervisors (PMOs) on the success of TB treatment because based on the statements of each respondent that they have a strong motivation to recover and health workers at the Puskesmas have provided sufficient information related to their disease.

CONCLUSIONS AND SUGGESTIONS

The findings of this study indicate that the successful treatment of tuberculosis patients in the Sangurara Health Center Working Area is significantly associated with treatment regularity, patients' knowledge of tuberculosis and the DOTS strategy, and the role of medication supervisors (PMOs). These findings highlight that successful TB treatment depends not only on the availability of anti-tuberculosis drugs but also on patients' adherence to treatment, adequate knowledge of the disease and its management, and consistent support and supervision from PMOs throughout the treatment period. Strengthening these components is therefore essential to improve treatment success and reduce treatment interruption.

Based on these findings, the Sangurara Health Center should strengthen TB control programs by enhancing health education for health workers, community

health volunteers, PMOs, TB patients, and their families, while also reinforcing the commitment and capacity of PMOs to supervise medication adherence effectively. Future studies are recommended to investigate additional factors that may influence TB treatment success, including patients' attitudes, nutritional status, social support, and psychological factors, to provide a more comprehensive understanding of determinants of treatment outcomes.

Based on the study findings, the Sangurara Health Center should prioritize strengthening the implementation of the DOTS strategy by focusing interventions on tuberculosis patients who demonstrate poor treatment adherence, limited knowledge of tuberculosis, or inadequate support from medication supervisors (PMOs). Practical measures include providing regular education and counseling for TB patients and their families, establishing periodic monitoring and mentoring of PMOs, implementing routine home visits or telephone follow-up for patients at risk of treatment interruption, and strengthening monitoring and evaluation of medication adherence through standardized recording and reporting systems. These measures are expected to improve treatment adherence, reduce loss to follow-up, and increase treatment success rates. Future research is recommended to investigate additional factors influencing TB treatment success, such as patients' attitudes, nutritional status, social support, and psychological factors, to provide evidence for more comprehensive TB control interventions.

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