

# The Relationship Between Self-Management and Medication Adherence In Pulmonary Tuberculosis Patients At The Sukarahayu Health Center, Subang Regency

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## The Relationship Between Self-Management and Medication Adherence In Pulmonary Tuberculosis Patients At The Sukarahayu Health Center, Subang Regency

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**ABSTRACT :** Self-management refers to an individual's ability to control aspects of himself, including physical, emotional, mental, and behavioral. Adherence to medication in Pulmonary Tuberculosis Patients is essential because, if not done regularly, it can cause drug resistance, recurrence of the disease, and even death. This study aims to determine the relationship between self-management and medication adherence in Pulmonary Tuberculosis patients at the Sukarahayu Health Center. This research is a type of quantitative research; the research design uses cross-sectional. The sample in this study consisted of 67 respondents, and the sampling technique used was accidental sampling. Data collection used a questionnaire on self-care activities and medication adherence, and data analysis was conducted using the Spearman rank test. The results of the study showed that most respondents had good self-management which was 80.6%, and some respondents had very compliant medication adherence, which was 85.1%. Statistical tests showed a relationship between the self-management variable and medication adherence (p-value 0.001). Conclusion: There is a relationship between self-management and medication adherence in Pulmonary Tuberculosis patients at the Sukarahayu Health Center, Subang Regency. It is hoped that researchers can further explore appropriate efforts or actions for adherence to taking pulmonary tuberculosis drugs.

**Keywords:** Self management, medication compliance, tuberculosis pulmonary

### 1. INTRODUCTION

Pulmonary tuberculosis (TB) is one of the leading infectious diseases causing death in the world. This disease is caused by a bacterium from the *Mycobacterium* group, which is commonly referred to as *Mycobacterium tuberculosis*. This disease is transmitted through sputum splashes that are transmitted to others and can be transmitted through the air containing these sputum splashes. Pulmonary tuberculosis is one of the world's health that is difficult to overcome even though control with the *Directly Observed Treatment Short-course (DOTS) strategy* has been implemented in many countries since 1995, it is because of its long treatment and required compliance from sufferers (Ministry of Health RI, 2022).

Ahdiyah (2022) conducted a study on the level of medication adherence in Pulmonary Tuberculosis patients at Putri Ayu Health Center. The results showed that one of the factors that caused the high failure rate of Pulmonary Tuberculosis treatment was the low adherence rate. Adherence to taking medication in Pulmonary TB patients is essential because, if not done routinely, it can cause drug resistance, recurrence of the disease, and even death. Several factors can cause patient non-compliance in undergoing Pulmonary TB treatment. For example, lack of knowledge about Pulmonary TB in general, job loss, economic hardship, limited access to health services, side effects of treatment, long duration of treatment and lack of good communication with health care providers. The impact of this non-adherence includes

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treatment that takes a long time, high costs, and the risk of death. Therefore, it is essential to self-manage in the treatment of Pulmonary TB (Gebreweld *et al.*, 2019).

In the context of Pulmonary TB treatment, *Self-management* or *self-management* refers to the ability of individuals to control aspects of themselves, including physical, emotional, mental, and behavioural, with the aim of achieving positive and purposeful things, even in difficult situations (Riadi, 2021). *Self-management* refers to a patient's ability to actively manage illness in daily life, including adherence to medication. A good level of *self-management* in Pulmonary TB patients has an essential meaning in improving quality of life, increasing cure rates, and controlling the spread of Pulmonary TB. *Self-management* is essential for Pulmonary TB patients because it can affect the patient's self-care. Therefore, *Self-management* plays a vital role in adherence to taking medication for Pulmonary TB patients (Harandi *et al.*, 2021).

One of the things that determines the success of Pulmonary TB treatment is the level of patient treatment adherence. Patient compliance with Pulmonary TB treatment is influenced by several factors, including long-term treatment, many patients have felt cured, so they stop taking drugs, the presence of other diseases, patients being lazy to seek treatment, no effort from themselves or motivation and support to take medication (Situmorang, 2020).

## 2. MATERIALS AND METHODS

Research Design This type of research is quantitative research using a correlational descriptive research design with a *cross-sectional approach*. Population, Sample, and Sampling The population in this study was patients with Pulmonary TB in the working area of Sukarahayu Health Center, as many as 201 people. Samples were taken from as many as 67 people with sampling techniques using *accidental sampling*. Instruments This research instrument uses a respondent demographic questionnaire consisting of response number, name, age, gender, last education, and occupation. This questionnaire has 25 questions in 3 indicators, including examination, treatment, prevention, and questionnaire. This self-care activity has been tested for validity and reliability in research conducted by Mukhtar (2013) with *Cronbach Alpha* results of 0.765. Moreover, the medication adherence questionnaire in Pulmonary TB patients (*MMAS-8*) contains eight questions, Items 1 to 7; if answered "yes", then given a score of 0 and if "no" is given a score of 1. Item 5, if answered "yes", is assigned a score of 1, and if "no", is given a score of 0. Item 8 uses a 5-point Likert scale consisting of 5 opinions of respondents requested, namely never (1), once (0.75), sometimes (0.50), usually (0.25), and always (0). This *MMAS-8* questionnaire has been tested for validity and reliability in research

conducted by Jamaludin (2019) with *Cronbach Alpha* results of 0.765. Data Analysis Analysis in this study using univariate and bivariate analysis and using the sperman rank test assisted by computerized SPSS 23. This univariate study will be presented in the form of a frequency distribution table of independent variables and dependent variables, namely age, sex, recent education, occupation, self-care activities and medication adherence (MMAS-8). Bivariate analysis in this study was to determine the relationship between self-management and medication adherence in Pulmonary TB patients. In this study, the analysis used was the *Spearman rank test* because the data scale of the two variables was ordinal type. If the significant value (*p-value*) < 0.05, it means that there is a relationship between self-management and drug adherence in Pulmonary TB patients.

### 3. RESULTS

**Table 1. Distribution of Respondent Characteristics Based on Age Data**

Variable	Mean	Std. Deviasi	Minimum	Maximum
Age	52,79	9,065	21	66

Based on the table above, the distribution of respondents' age characteristics found that the average age of the respondents was 52.79 years, with the lowest age respondent being 21 years old and the highest age respondent being 66 years old, with a standard deviation of 9.065.

**Table 2. Distribution of Respondent Characteristics Based on Gender**

Gender	Frequency (f)	Presented (%)
Law Law	21	31,3
Woman	46	68,7
<b>Total</b>	<b>67</b>	<b>100</b>

Based on the table above, the distribution of gender characteristics of the respondents was found that most were female, as much as 68.7%, and a small part were male, as much as 31.3%.

**Table 3. Distribution of Respondent Characteristics Based on Education**

Last education	Frequency (f)	Presentase (%)
SD	37	55,2
SMP	17	25,4
SMA	9	13,4
College	4	6,0
<b>Total</b>	<b>67</b>	<b>100</b>

Based on the table above, the distribution of educational characteristics of the respondents was obtained. Most were elementary school educated, as much as 55.2%, and a small part were from higher education, as much as 6.0%.

**Table 4. Distribution of Respondent Characteristic Based on Pekerjaan**

Work	Frequency (f)	Presentase (%)
Not working	37	55,2
PNS	4	6,0
Wirasswasta	17	25,4
Swasta	9	13,4
<b>Total</b>	<b>67</b>	<b>100</b>

Based on the table above, the distribution of the work characteristics of the respondents found that most of them were not working as much as 55.2%, and a small part of civil servant workers were 6.0%.

**Table 5. Self Management Distribution**

Self management	N	%
Good	54	80,6
Enough	13	19,4
Less	0	0

Based on Table 2 of the self-management distribution of respondents of Pulmonary TB patients at Sukarahayu Health Center, it was found that almost all respondents, as much as 80.6%, were in a suitable category, and a small part of the category was enough, as much as 19.4%

**Table 6. Distribution of medication adherence**

Adherence to taking medication	N	%
Very obedient	57	85,1
Keep	10	14,9
Never	0	0

Based on Table 3 of the distribution of medication adherence to Pulmonary TB patients at the Sukarahayu Health Center, it was found that almost all respondents were in the very compliant category as much as 85.1% and a small part in the medium category, as much as 14.9%.

**Table 7. The relationship of self-management with medication adherence**

Self Management	Adherence to taking medication				Total	
	Very obedient		Keep			
	F	%	F	%	F	%
Good	55	82,1%	0	0,0 %	55	82,1%
Enough	2	3,0 %	10	14,9%	12	17,9%
Total	57	85,1%	10	14,9%	67	100%
p-value			0,001			
Coefficient			0.592			

17 It is based on Table 4 of research results on the relationship of *self-management* with medication adherence in pulmonary TB patients, using *the Spearman rank test*. This test is used to prove the hypothesis of whether there is a relationship between *self-management* and drug adherence in pulmonary TB patients. Based on the results of the *Spearman rank test*, a *p-value* of 0.001 was obtained with a coefficient value of 0.592, which means that there is a moderate relationship between *self-management variables* and medication adherence variables in pulmonary TB patients. The coefficient number is optimistic or unidirectional, which means that the better the *self-management*, the more adherent the level of adherence to taking medication.

#### 4. DISCUSSION

##### Self Management in Pulmonary TB Patients

Based on the research results from 67 respondents, most respondents' self-management is included in the category of good self-management, which is as much as 80.6%. Self-management is reflected in respondents feeling that they need help to overcome the symptoms of the disease they are experiencing, need treatment to cure the disease they suffer, routinely consume medication every day, and make efforts to prevent the transmission of pulmonary TB experienced.

The study results showed that most respondents have carried out diagnosis, treatment, and prevention of disease transmission well, so the treatment program for pulmonary TB patients is running well.

This is in line with the research of Isaiah et al. (2021), which found that some pulmonary TB respondents had a good level of self-management which was 59%. Meanwhile, another study stated that most respondents with a good level of self-management had a sense of desire to recover from pulmonary TB because it was driven by several factors, such as the cost of free treatment, continuous screening, and family factors that encouraged respondents to do good self-management (Ariska, 2021).

A good level of self-management can positively impact several aspects of pulmonary TB patients; this is important, considering that the healing process of pulmonary TB patients must start from themselves.

##### Adherence to Taking Medication in Pulmonary TB Patients

Based on the research results from 67 respondents, most respondents' adherence to me is in the category of very compliant medication adherence, which is as much as 85.1%. Good compliance is reflected in the fact that patients always remember when to take medicine and

do not miss the schedule even though they feel in good condition.

This aligns with Widyanto's (2019) research, which shows that 65.8% of respondents are compliant. It is stated that medication adherence plays an essential role in the failure or success of pulmonary TB treatment. However, according to Safri (2019), several things can affect the level of adherence to taking medication for pulmonary TB patients, including occupation or income, age, gender, and education.

Education is not a determining factor for compliance; knowledge is vital in improving medication adherence in pulmonary TB patients.

### **The Relationship Between Self Management and Drug Adherence in Pulmonary TB Patients**

The results of the study showed a relationship between *the variable of self-management* and medication adherence in patients with pulmonary tuberculosis, as evidenced by *the results of the Spearman rank test* with a p-value of 0.001. The coefficient value was obtained as 0.592, meaning a moderate relationship exists between *the self-management variable* and the medication adherence variable in pulmonary TB patients. The coefficient number has a positive value or is unidirectional, which means that the better *the self-management*, the more compliant the level of medication adherence is.

There is a relationship between *self-management* and medication adherence in pulmonary TB patients. Good *self-management* will affect pulmonary TB patients' ability to do things regularly so that they can influence their behavior. The better *the self-management*, the more patients will increase their compliance with taking medication and, in the end, will be very compliant with treatment to cure their disease.

## **5. CONCLUSIONS**

It can be concluded that there is a relationship between *self-management* and adherence to taking medication in Pulmonary TB patients at the Sukarahayu Health Center, Subang Regency, evidenced by a p-value of 0.001 with a coefficient value of 0.592, which means that there is a moderate relationship between *the variable of self-management* and the variable of adherence to taking medication in Pulmonary TB patients. The coefficient number is optimistic or unidirectional, which means that the better the *self-management*, the more adherent the level of adherence to taking medication. The results of this study can be the basis for further researchers to explore further appropriate efforts or actions for adherence to taking Pulmonary TB drugs. It would be great if this study were combined with extrinsic factors related to what kind of TB program and related to family support.

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