

THE ROLE OF SELF-CARE IN IMPROVING QUALITY OF LIFE IN PULMONARY TUBERCULOSIS PATIENTS

Nabila Aufa Diaz, Eka Nur So'emah, Arum Dwi Ningsih

Bina Sehat PPNI University, Mojokerto, Indonesia

Corresponding Author: nabilaaufadiaz@gmail.com

ABSTRACT

Background: Pulmonary tuberculosis is a chronic infectious disease that requires long-term treatment and can affect patients' physical, psychological, and social conditions as well as their quality of life. Self-care plays an important role in treatment adherence and in maintaining quality of life. **Purpose:** To determine the relationship between self-care and quality of life in pulmonary tuberculosis patients in the working area of Grati Public Health Center, Pasuruan. **Methods:** This correlational analytical study used a cross-sectional approach involving 37 respondents selected through purposive sampling from a population of 118 patients. Self-care was measured using the Self-Care Agency Scale (SCAS), and quality of life was measured using the WHOQOL-BREF. Data were analyzed using the Spearman Rank correlation test at a significance level of $\alpha = 0.05$. **Results:** A total of 54.1% of respondents had high self-care and 54.1% had good quality of life. The Spearman Rank test showed a significant, very strong, and positive relationship between self-care and quality of life ($p = 0.000$; $r = 0.896$). **Conclusion:** The higher the self-care of tuberculosis patients, the better their quality of life and treatment adherence during therapy.

Keywords: *self-care, quality of life, pulmonary tuberculosis.*

INTRODUCTION

Pulmonary tuberculosis (TB) is an infectious disease caused by *Mycobacterium tuberculosis* and remains a global public health problem. This disease generally attacks the lungs but can also infect other organs such as the kidneys, spine, and brain. TB treatment requires long-term therapy using Anti-Tuberculosis Drugs (ATD), so patients face not only physical problems but also psychological disturbances, social difficulties, and reduced productivity that can affect their quality of life (Kemenkes, 2024). This condition shows that the success of therapy is determined not only by the administration of anti-tuberculosis drugs but also by the patient's ability to perform self-care during treatment. Self-care is an individual's ability to carry out self-care actions to maintain health, control disease, and prevent complications. In pulmonary tuberculosis patients, self-care includes adherence to taking anti-tuberculosis drugs, meeting nutritional needs, regulating activity and rest, monitoring disease symptoms, and implementing behaviors to prevent transmission (Camilla Elena Magi et al., 2024).

According to the World Health Organization (WHO), in 2023 there were more than 10.8 million tuberculosis cases worldwide, with Indonesia ranking second as the country with the highest TB burden after India (World Health Organization, 2024). Nationally, it is estimated that there are more than 1,090,000 TB cases each year with around 125,000 deaths (Kemenkes, 2025). In East Java Province, the number of pulmonary TB cases reached 78,799, while the case detection rate in Pasuruan Regency reached 92%, indicating that tuberculosis remains a health problem requiring serious attention, including efforts to improve patients' quality of life during treatment (Deniati et al., 2023).

Several previous studies have examined the relationship between self-care and quality of life in pulmonary tuberculosis patients. A study by Iche et al (2020) showed that around 28.83% of pulmonary TB patients had low quality of life in the physical, psychological, social relationship, and environmental domains. Meanwhile, Simatupang et al (2025) reported that good self-care was associated with improved quality of life in patients, particularly in the physical, psychological, social, and spiritual domains. Similar results were found by Trisna Feberwati Laia et al (2025) which showed a relationship between self-care and quality of life in pulmonary TB patients, where patients with high self-care tended to have better quality of life. In addition, Fauziah et al (2025) revealed that self-care education can improve quality of life by increasing treatment adherence, nutritional intake, and patients' ability to manage disease symptoms. These findings indicate that self-care plays an important role in improving the quality of life of pulmonary tuberculosis patients.

This study provides a novel contribution in the form of empirical evidence regarding the relationship between self-care and quality of life in pulmonary tuberculosis patients at the primary health care level, specifically in the working area of Grati Public Health Center, Pasuruan. The results of this study are expected to serve as a basis for health workers, particularly nurses, in developing self-care education and mentoring programs to improve the quality of life of pulmonary tuberculosis patients. In addition, this study can serve as a reference for future research in developing self-care-based nursing interventions for tuberculosis patients.

METHODS

This study used a quantitative approach with a correlational analytical design, as it aimed to analyze the relationship between self-care and quality of life in pulmonary tuberculosis patients (Wawan Kurniawan & Aat Agustini, 2023). Data collection used a cross-sectional approach, in which the self-care and quality of life variables were measured at the same time. The study was conducted in the working area of Grati Public Health Center, Pasuruan Regency, from April to May 2026.

The study population consisted of all pulmonary tuberculosis patients recorded in the working area of Grati Public Health Center, Pasuruan, totaling 118 patients. The study sample consisted of 37 respondents selected using a non-probability sampling technique with the purposive sampling method, based on predetermined inclusion and exclusion criteria (Hardani et al., 2020).

Self-care data were collected using the Self-Care Agency Scale (SCAS) questionnaire, consisting of 15 statements to measure respondents' self-care ability. Quality of life data were collected using the World Health Organization Quality of Life-BREF (WHOQOL-BREF) questionnaire, consisting of 26 statements covering four domains: physical health, psychological health, social relationships, and environment. Before data collection, respondents were given an explanation of the study's purpose and asked to sign an informed consent form. Questionnaires were completed directly by respondents with assistance from the researcher.

Data were analyzed through the stages of editing, coding, scoring, and tabulating, then processed using SPSS version 21. Univariate analysis was used to describe the frequency distribution of respondent characteristics, self-care levels, and quality of life (Slamet Widodo et al., 2023). Bivariate analysis was conducted using the Spearman Rank

correlation test, as both variables were of ordinal scale, aiming to determine the strength and direction of the relationship between self-care and quality of life in pulmonary tuberculosis patients. The hypothesis was accepted if the p-value obtained was ≤ 0.05 , indicating a significant relationship between the two variables.

This study has been approved and granted research permission to conduct research at Grati Public Health Center, Pasuruan. This study underwent an ethical review through the Research Ethics Committee of Bina Sehat PPNI University, Mojokerto, with Reference Number No. 67/KEP/UBS-PPNI/IV/2026, dated April 1, 2026.

FINDINGS AND DISCUSSION

RESEARCH RESULTS

GENERAL DATA

Tabel 1 Frequency Distribution of Respondents by Sex, Age, Last Education, Treatment Phase, and History of Treatment Discontinuation in Pulmonary Tuberculosis Patients in the Working Area of Grati Public Health Center, Pasuruan

Respondent Category	Frequency	Percentage (%)
Sex		
Male	21	56,8%
Female	16	43,2%
Total	37	100%
Age		
17 – 25 years	9	24,3%
26 – 35 years	3	8,1%
36 – 45 years	7	18,9%
46 – 55 years	7	18,9%
56 – 65 years	11	29,7%
Total	37	100%
Last Education		
No schooling	5	13,5%
Elementary school	20	54,1%
Junior high school	2	5,4%
Senior high school	10	27,0%%
Total	37	100%
Treatment Phase		
Intensive	16	43,2%
Continuation	21	56,8%
Total	37	100%
History of Treatment Discontinuation		
Yes	13	35,1%
Never	24	64,9%
Total	37	100%

Source: Primary data, 2026

Based on Table 1, most respondents were male (56.8%), nearly half were aged 56–65 years (29.7%), most had completed elementary school as their last education (54.1%), most were in the continuation treatment phase (56.8%), and most respondents had never experienced treatment discontinuation (64.9%).

SPECIFIC DATA

1. Respondent Characteristics Based on Self-Care in Pulmonary Tuberculosis Patients in the Working Area of Grati Public Health Center, Pasuruan

Tabel 1 Frequency Distribution of Respondents Based on Self-Care in Pulmonary Tuberculosis Patients in the Working Area of Grati Public Health Center, Pasuruan

No	Self-care	Frequency	Percentage (%)
1	Low	5	13,5%
2	Moderate	12	32,4%
3	High	20	54,1%
	Total	37	100%

Source: Primary data, 2026

Based on Table 2, it is known that most pulmonary tuberculosis patients had high self-care, with 20 respondents (54.1%).

2. Respondent Characteristics Based on Quality of Life in Pulmonary Tuberculosis Patients in the Working Area of Grati Public Health Center, Pasuruan

Tabel 2 Frequency Distribution of Respondents Based on Quality of Life in Pulmonary Tuberculosis Patients in the Working Area of Grati Public Health Center, Pasuruan

No	Quality of Life	Frequency	Percentage (%)
1	Low	6	16,2%
2	Moderate	11	29,7%
3	Good	20	54,1%
	Total	37	100%

Source: Primary data, 2026

Based on Table 3, it is known that most pulmonary tuberculosis patients had good quality of life, with 20 respondents (54.1%).

3. Relationship Between Self-Care and Quality of Life in Pulmonary Tuberculosis Patients in the Working Area of Grati Public Health Center, Pasuruan

Tabel 3 Cross-Tabulation of the Relationship Between Self-Care and Quality of Life in Pulmonary Tuberculosis Patients in the Working Area of Grati Public Health Center, Pasuruan

Self-Care	Kualitas Hidup						Total	
	Low (F)	Low (%)	Moderate (F)	Low (%)	Good (F)	Good (%)		
Low	4	80,0%	1	20,0%	0	0,0%	5	100%
Moderate	2	16,7%	9	75,0%	1	8,3%	12	100%
High	0	0,0%	1	5,0%	19	95,0%	20	100%
Total	6	16,2%	11	29,7%	20	54,1%	37	100%
Statistical test results		<i>p-value</i> : 0,000		<i>p</i> : <0,05			<i>r</i> : 0,896	

Source: Primary data, 2026

Table 4 shows that of the 5 respondents with low self-care, nearly all had low quality of life (4 people, 80%). Of the 12 respondents with moderate self-care, most had moderate quality of life (9 people, 75%). Of the 20 respondents with high self-care, nearly all had good quality of life (19 people, 95%).

Based on data analysis using the Spearman Rank statistical test through SPSS version 21, a significance value (2-tailed) *p-value* of 0.000 was obtained, which is smaller than the significance level ($p < 0.05$). This proves that there is a significant relationship between self-care and quality of life in tuberculosis patients. The correlation coefficient of (+) 0.896 indicates a very strong relationship between the two variables. The positive correlation coefficient (+) 0.896 indicates that the relationship between self-care and quality of life is unidirectional. It can therefore be concluded that if a tuberculosis patient has high self-care, their quality of life will also be good.

DISCUSSION

1. Identification of Self-Care Levels in Pulmonary Tuberculosis Patients

The results show that most pulmonary tuberculosis patients in the working area of Grati Public Health Center, Pasuruan, had high self-care (54.1%), while 32.4% were in the moderate category and 13.5% in the low category. These results indicate that the majority of respondents were able to perform self-care independently during treatment. The high level of self-care indicates that most patients already have the awareness and ability to actively participate in the treatment process, thereby supporting successful therapy and preventing complications or treatment discontinuation.

These results are consistent with the study by Trisna Feberwati Laia et al (2025), which reported that most tuberculosis patients had good self-care during treatment. This finding is also consistent with Dorothea Orem's theory, which states that self-care is an individual's ability to consciously perform actions to meet self-care needs in order to maintain life, health, and well-being. Patients who are able to carry out self-care well tend to be more adherent to therapy, better able to recognize changes in their health condition, and more responsible for their recovery process.

2. Identification of Quality of Life Levels in Pulmonary Tuberculosis Patients

The results show that most pulmonary tuberculosis patients had good quality of life (54.1%), while 29.7% had moderate quality of life and 16.2% had low quality of life. These results indicate that the majority of respondents were able to maintain good physical, psychological, social relationship, and environmental conditions despite still undergoing tuberculosis treatment. This condition suggests that the treatment process, combined with the patient's ability to adapt to the disease, can help maintain quality of life so that patients remain able to carry out daily activities optimally.

These results are consistent with the studies by Simatupang et al (2025) and Trisna Feberwati Laia et al (2025), which showed that most tuberculosis patients had good quality of life during treatment. This finding is also consistent with the WHOQOL concept, which states that quality of life is an individual's perception of their position in life, influenced by physical, psychological, social relationship, and environmental conditions. Patients who have a better understanding of their disease, adhere to treatment, and are able to adapt to their health condition tend to have better quality of life compared to patients who experience obstacles during treatment.

3. Analysis of the Relationship Between Self-Care and Quality of Life in Pulmonary Tuberculosis Patients

The results show that most respondents had high self-care (54.1%), while most respondents also had good quality of life (54.1%). The Spearman Rank test showed a significant relationship between self-care and quality of life in pulmonary tuberculosis patients ($p = 0.000$; $r = 0.896$), indicating a very strong positive relationship. This indicates that the better a patient's ability to perform self-care, the better their perceived quality of life. Self-care, which includes adherence to taking anti-tuberculosis drugs, meeting nutritional needs, adequate rest, maintaining personal and environmental hygiene, and the ability to recognize and address health problems, plays an important role in maintaining the physical, psychological, social, and environmental conditions of patients during tuberculosis treatment (Iswatun, 2025).

These results are consistent with the studies by Simatupang et al (2025) and Abiz (2020), which showed a significant relationship between self-care and quality of life in pulmonary tuberculosis patients, where patients with better self-care had higher quality of life. Similar findings were also reported by Trisna Feberwati Laia et al (2025), which stated that most patients with good self-care had good quality of life during tuberculosis therapy. According to the Self-Care Deficit Theory proposed by Dorothea Orem, individuals who are able to independently meet their self-care needs are better able to maintain health, prevent complications, and improve their overall well-being. In tuberculosis patients, the ability to perform self-care can increase treatment adherence, accelerate recovery, and reduce the physical and psychological impact of the disease, thereby improving quality of life Notoatmodjo (2018).

However, these results should be interpreted with consideration of several limitations of this study. First, the use of a cross-sectional design only describes the relationship between variables at a single point in time and therefore cannot explain causal relationships. Second, the sample size of only 37 patients means the results cannot be generalized to a broader population. Third, this study did not include the respondents'

occupation as a variable, so the influence of work activities or demands on self-care and quality of life could not be analyzed. Future research is recommended to use a longitudinal or cohort design with a larger number of respondents and to include additional variables such as family support, self-efficacy, level of knowledge, economic status, occupation, nutritional status, and comorbidities, so that the factors influencing the quality of life of tuberculosis patients can be analyzed more comprehensively.

CONCLUSION

Based on the results of this study conducted on pulmonary tuberculosis patients in the working area of Grati Public Health Center, there is a relationship between self-care and quality of life in pulmonary tuberculosis patients, with a very strong degree of association. The Spearman Rank statistical test showed a significance value (2-tailed) p-value of $0.000 < \alpha 0.05$, so it can be concluded that H_0 is rejected and H_1 is accepted, with a correlation coefficient of $r = 0.896$, indicating a significant, very strong, and positive relationship between self-care and quality of life in pulmonary tuberculosis patients. This means that the higher the self-care of tuberculosis patients, the better their perceived quality of life. Patients are advised to maintain self-care behaviors, while public health centers are expected to enhance education, mentoring, and monitoring of patients' self-care practices as an effort to improve quality of life. Future research is recommended to include additional factors in order to obtain more comprehensive results regarding the factors influencing the quality of life of tuberculosis patients.

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