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THE RELANTIONSHIP BETWEEN DEPRESSION LEVELS AND QUALITY OF LIFE IN TUBERCULOSIS (TB) PATIENTS AT THE PULMONARY POLYCLINIC OF PAKUHAJI HOSPITAL TANGERANG REGENCY

Nurul Mutmainnah Imran[1], Osep Yasier Almunsiri[2], Alif Nurul Rosyidah[3]

[1]Applied Bachelor Study Program in Nursing, Poltekkes Kemenkes Banten, nurulmutmaiinnah@gmail.com
[2]Nursing Departement, Poltekkes Kemenkes Banten, osepyasier240996@gmail.com
[3]Nursing Departement, Poltekkes Kemenkes Banten, anr.alif.nurul@gmail.com
**Corresponding author:* nurulmutmaiinnah@gmail.com

ABSTRACT

Background: Tuberculosis is a lung infection known as TB. Prolonged treatment of tuberculosis often causes tuberculosis patients stress or depression. Poor psychological conditions can reduce the motivation of patients to undergo long and complex treatment. **Objective:** To determine the relationship between the level of depression and the quality of life of tuberculosis (TB) patients at Pakuhaji Hospital, Tangerang Regency. **Method:** The method used in this study is quantitative with a correlational analytical design. The sampling method in this study is by accidental sampling. The sample used in this study was 87 respondents. The instruments used in this study were the standard questionnaire Zung Self-rating Depresssion Scale (ZSDS) and the World Health Organization Quality Of Life- BREF (WHOQOL-BREF). **Results:** The results of the chi-square test were obtained with a P Value of 0.001 < from a significant value (α = 0.05). **Conclusion:** The results of this study show that there is a relationship between the level of depression and the quality of life of people with tuberculosis (TB).
Keywords: "*Depression rate"; "Quality of life"; "Tuberculosis"*

INTRODUCTION

Tuberculosis, or TB, is a disease caused by Mycobacterium tuberculosis bacteria in the lungs, which causes respiratory problems such as shortness of breath and chronic cough (RSST, 2022). The number of people infected with pulmonary TB bacteria increases every year, making it the second most common infectious disease worldwide. Pulmonary tuberculosis is a disease that affects a person's physical health, as well as their mental and social well-being (Noviani W, 2018 in Sari et al., 2021). TB requires a long time to treat, which often causes sufferers to experience stress or depression (WHO, 2022 in Kogoya et al., 2024).

According to the World Health Organization (WHO, 2023), TB remains one of the deadliest infectious diseases in the world. According to the Indonesian Ministry of Health (2024), Indonesia is the second country with the highest number of TB cases in the world, with 1,060,000 TB cases and 134,000 deaths due to TB each year in Indonesia, 15 people die from TB every hour. Data on tuberculosis (TB) cases found by the Indonesian Ministry of Health (2024) shows that an estimated 50,391 TB cases were found in Banten Province. Data from the Tangerang Regency Health Office (2024) shows that the number of tuberculosis cases in 2023 that were found and treated in Tangerang Regency was 11,720 cases. This number has increased compared to previous years. According to opendata tangerangkab data on the top 10 outpatient diseases at Pakuhaji Regional Hospital in 2023, tuberculosis ranked first. The number of tuberculosis cases at Pakuhaji Regional Hospital in 2023 was 632. This number increased to 787 in 2024.

The social stigma attached to this disease often makes sufferers feel isolated and depressed. This poor psychological state can affect their motivation to undergo long and complex treatment. As a result, the healing process is slower, and the patient's quality of life is significantly reduced (Ledjepen, E.D. and Sagita, 2019). The depression caused by the long and tiring treatment of pulmonary tuberculosis, coupled with the social stigma often experienced by patients, can lead to prolonged depression. This condition not only worsens the

physical symptoms of the disease but also disrupts the patient's mental well-being. As a result, the patient's overall quality of life becomes very low (Endria, 2019 in Kogoya et al., 2024). These changes have altered the way sufferers view the meaning of life and their level of satisfaction with it (Sarafino, 2011 in Dedi Pahrul et al., 2021). The relationship between depression and quality of life in pulmonary tuberculosis patients is consistent with findings from several studies. Research conducted by Kogoya et al. (2024) showed a relationship between depression levels and quality of life in TB patients. Assessing the quality of life of tuberculosis patients is crucial because the disease can impact various aspects of their lives, from physical health to social well-being. Research conducted by Ledjepen, E.D., and Sagita (2019) showed a significant correlation between depression levels and quality of life. By measuring quality of life, we can determine how much the disease disrupts their daily lives and the extent to which treatment has improved their quality of life (Dedi Pahrul, Helsy Desvitasari, and Asih Fatriansari, 2021).

The results of a preliminary study conducted at the Lung Polyclinic of Pakuhaji Regional Hospital. The nurses at the Lung Polyclinic revealed that the incidence of Tuberculosis at Pakuhaji Regional Hospital is increasing year by year. A brief interview with several TB patients at Pakuhaji Regional Hospital who were queuing for medication revealed that one patient said that he felt bored taking medication every day and had to continue. One person said he was tired of undergoing treatment. Two others said that they felt isolated by their neighbors because of their illness. Based on the description of the problem in the background, the researcher was interested in conducting a study entitled "The Relationship Between Depression Levels and Quality of Life in Tuberculosis (TB) Patients at the Lung Polyclinic of Pakuhaji Regional Hospital."

MATERIALS AND METHODS

This type of research uses a quantitative method with a correlational analytical method, which aims to determine the relationship between variables, with a cross-sectional design. The population in this study was 87 people with an accidental sampling technique. This research was conducted at the Lung Polyclinic of Pakuhaji Regional Hospital, Tangerang Regency from February to March 2025. Data collection techniques used primary and secondary data. Primary data were obtained by distributing questionnaires to respondents. Secondary data were obtained from information from nurses at the Lung Polyclinic of Pakuhaji Regional Hospital, Tangerang Regency. Data analysis used was univariate and bivariate analysis. The data analysis method used was *Chi Square*.

RESULTS AND DISCUSSION

1. Univariate analysis
   Univariate analysis in this study consists of respondent characteristics consisting of: age, gender, depression level, and quality of life.

Age	Frequency (f)	Percentage (%)
17-25 old	10	11,5
26-35 old	12	13,8
36-45 old	31	35,7
46-55 old	25	28,7
56-65 old	9	10,3
Total	87	100,0

Table 1 Frequency Distribution of Respondents with Tuberculosis (TB) Patients at the Lung Polyclinic of Pakuhaji Regional Hospital Based on Age (n=87)

Based on **table 1**, it shows that the majority of respondents were aged 36-45 years, namely 31 respondents (35.7%).

Gender	Frequency (f)	Percentage (%)
Boy	49	56,3
Girl	38	43,7
Total	87	100,0

Tabel 2 Frequency Distribution of Respondents with Tuberculosis (TB) Patients at the Lung Polyclinic of Pakuhaji Regional Hospital Based on Gender (n=87)

Based on **table 2**, it shows that the majority of respondents were male, 49 respondents (56.3%) and 38 respondents (43.7%) were female.

Depression level	Frequency (f)	Percentage (%)
Normal	69	79,3
Mild depression	15	17,3
Moderate depression	3	3,4
Total	87	100,0

Table 3 Frequency Distribution of Respondents with Tuberculosis (TB) Patients at the Lung Polyclinic of Pakuhaji Regional Hospital Based on Depression Level (n=87)

Based on **table 3**, it shows that the majority of Tuberculosis (TB) sufferers at the Lung Polyclinic of Pakuhaji Regional Hospital have normal levels of depression, as many as 69 respondents (79.3%), mild depression, 15 respondents (17.3%), and moderate depression, 3 respondents (3.4%).

Quality of life	Frequency (f)	Percentage (%)
Bad	28	32,2
Fair	56	64,4
Good	3	3,4
Total	87	100,0

Table 4 Frequency Distribution of Respondents with Tuberculosis (TB) Patients at the Lung Polyclinic of Pakuhaji Regional Hospital Based on Quality of Life (n=87)

Based on **table 4**, it shows that the majority of tuberculosis (TB) sufferers at Pakuhaji Regional Hospital have a poor quality of life, as many as 28 respondents (32.2%), a fair quality of life as many as 56 respondents (64.4%), and a good quality of life as many as 3 respondents (3.4%).

2. Bivariate analysis

The bivariate analysis used in this study is the *chi square* test.

Depression level	Quality of life						Amount		*P* value
	Bad		Fair		Good				
	f	%	f	%	f	%	f	%	0,001
Normal	15	21,7	51	73,9	3	4,3	69	100,0	
Mild depression	10	66,7	5	33,3	0	0,0	15	100,0	
Moderate depression	3	100,0	0	0,0	0	0,0	3	100,0	
Total	28	32,2	56	64,4	3	3,4	87	100,0	

Table 5 Results of the Analysis of the Relationship between Depression Levels and Quality of Life in Tuberculosis (TB) Patients at the Lung Clinic, Pakuhaji Regional Hospital, Tangerang Regency (n=87)

Based on **table 5**, it shows that respondents with a normal level of depression as many as 51 respondents (73.9%) have a sufficient quality of life. Meanwhile, respondents who have a mild level of depression as many as 10 respondents (66.7%) have a poor quality of life. Based on the results of the hypothesis test using the chi-square statistical test, a p value of 0.001 was obtained. A value of 0.000 <0.05 means that the decision Ha is accepted, which means there is a significant relationship between the level of depression and the quality of life of tuberculosis (TB) patients at Pakuhaji Regional Hospital, Tangerang Regency.

1. Univariat analysis
   a. Frequency Distribution by Age

      Based on the results of this study, it shows that the age group that is most dominant is 36-45 years old, with 31 respondents (35.7%). This is in line with the results of research (Kogoya,

Irawan and Tobroni, 2024) which stated that 33.3% of respondents are predominantly aged 36-45 years, where the rate of TB transmission is higher in productive age. This is due to more frequent interaction with the surrounding environment that is exposed to bacteria, contact with people suffering from pulmonary tuberculosis, an unhealthy work environment, and this age group spends time and energy on work where energy is greatly drained, reduced rest time, thus causing a decrease in body resistance.

b. Frequency Distribution by Gender

Based on the results of this study, it shows that the majority of respondents were male, as many as 49 respondents (56.3%). This is in line with research (Happyanto et al., 2024) that as many as 56.01% of patients were male, while 43.98% of patients were female. The difference between male and female gender greatly affects the incidence of tuberculosis. Globally, men are described as having strong material compared to women in terms of income (prestige, strength, and nutrition), health habits (smoking and alcohol), and exposure to external factors (work, stressors, the external environment, and peers) (Happyanto et al., 2024).

c. Frequency Distribution Based on Depression Level

The results of this study indicate that the frequency distribution of depression levels was as follows, 69 respondents (79.3%) had normal depression, 15 respondents (17.3%) had mild depression, and 3 respondents (3.4%) had moderate depression. These results align with research conducted by Noviana (2021), which showed that most pulmonary TB patients experience varying degrees of depression. The most prevalent frequency distribution of depression levels was normal depression (79.3%). This finding aligns with research by Kogoya, Irawan, and Tobroni (2024), which found that 60% of respondents were not depressed or were within normal limits. According to Ledjepen, E.D., and Sagita (2019), this indicates that emotional disturbances, characterized by persistent and profound sadness and behavioral disturbances, were not experienced by respondents.

This is because, according to the researchers' assumptions, respondents were still enjoying and accepting their condition and did not feel burdened by their illness. Patients are not bothered by symptoms due to tuberculosis and can go about their daily lives without feeling pain and can carry out activities well without interference or assistance from others.

d. Frequency Distribution Based on Quality of Life

The results of this study indicate that the frequency distribution of quality of life data shows that 28 respondents (32.2%) had a poor quality of life, 56 respondents (64.4%) had a fair quality of life, and 3 respondents (3.4%) had a good quality of life. The majority of respondents, 56 respondents (64.4%), had a fair quality of life. This is because, according to the researchers' assumptions based on the results, respondents had a fairly good perception of their physical, psychological, social, and environmental health, even after being diagnosed with tuberculosis.

This is in line with research (Kogoya, Irawan, and Tobroni, 2024), which showed that more respondents experienced a moderate quality of life (60.0%) than respondents experienced a poor quality of life (0.0%). This is because, according to the researchers' assumptions based on the results, respondents had a fairly good perception of their physical, psychological, social, and environmental health, even after being diagnosed with tuberculosis. According to (Dedi Pahrul, Helsy Desvitasari, and Asih Fatriansari, 2021), this occurs because improving quality of life is a crucial goal and key to the healing process. Although they often feel burdened, improving quality of life requires strong support from family, caregivers, and a spiritual approach. Support from family and the community, along with internal motivation to recover and adhere to treatment programs, will ultimately lead to improved health.

2. Bivariate analysis

Based on the results of the study, it shows that respondents with a normal level of depression as many as 51 respondents (73.9%) have a sufficient quality of life. While respondents who have a mild level of depression as many as 10 respondents (66.7%) have a poor quality of life. Based on the results of the chi square test that has been conducted on 87 respondents using the obtained p value = 0.001 with α = 0.05. The p value obtained is smaller than α, so the research hypothesis is accepted which means there is a Relationship Between Depression Levels and Quality of Life in Tuberculosis (TB) Patients in the Lung Polyclinic of Pakuhaji Regional Hospital, Tangerang Regency.

This study is in line with research (Kogoya, Irawan and Tobroni, 2024) which states that there is a relationship between the level of depression and the quality of life in TB patients in the Bendo Community Health Center Working Area, Pare District, Kediri Regency with a p value of 0.001. Where the strength of the relationship is categorized as quite strong. The relationship between variables is negative, meaning the lower the level of depression in pulmonary TB sufferers, the better the quality of life of pulmonary TB sufferers, and vice versa. Researchers assume that tuberculosis sufferers who have a good quality of life are comparable to normal levels of depression, because respondents tend to have positive feelings or feel unburdened by the disease they suffer from, have a good ability to face and overcome various changes, have high enthusiasm for recovery, and are also supported by family support, and social relationships that are still running well.

Tuberculosis patients with a poor quality of life have a mild level of depression, which is comparable. In line with research (Ledjepen, E.D. and Sagita, 2019), it was found that respondents with mild levels of depression were more likely to have a poor quality of life. Researchers assume this occurs because tuberculosis patients require a full six months of treatment with guidance from various types of drugs. This causes some patients to feel bored or tired of the treatment process. Consequently, many of them stop or do not complete treatment, which can trigger psychological stress or depression. In addition, many patients experience negative feelings, such as hopelessness, guilt, sadness, crying, despair, nervousness, anxiety, and a lack of life satisfaction due to their illness. In addition, a lack of family support and negative views from others make patients less motivated or enthusiastic about undergoing the treatment process, which can trigger psychological stress or depression.

When someone is diagnosed with tuberculosis, they experience various fears, including fear of treatment, side effects, death, job loss, social rejection and discrimination, feelings of low self-esteem, and constant isolation due to shame about their disease. Pulmonary TB patients often experience rejection and isolation from society, which causes them to feel depressed and isolated, leading them to withdraw from social circles and become depressed (Putri, 2018 in Kogoya, Irawan, and Tobroni, 2024). This poor psychological condition can affect their motivation to undergo long and complex treatment. As a result, the healing process is slower, and the patient's quality of life decreases significantly (Ledjepen, E.D., and Sagita, 2019). When a TB patient's quality of life declines, treatment delays can negatively impact treatment success and can lead to discontinuation or incomplete treatment (Jannah, 2015 in Tanauma et al., 2023).

CONCLUSION

Based on the results of research conducted on the relationship between depression levels and quality of life in tuberculosis patients at the pulmonary outpatient clinic at Pakuhaji Regional Hospital, Tangerang Regency, it can be concluded that:

1) The majority of respondents, based on age characteristics, of the 87 respondents: 31 respondents (35.7%) were aged 36-45 years. Based on gender, 49 respondents (56.3%) were male and 38 respondents (43.7%) were female.
2) The majority of tuberculosis (TB) patients at the pulmonary outpatient clinic at Pakuhaji Regional Hospital had normal depression levels (69 respondents (79.3%), mild depression (15 respondents (17.3%), and moderate depression (3 respondents (3.4%).
3) The majority of tuberculosis (TB) patients at Pakuhaji Regional Hospital had poor quality of life (28 respondents (32.2%), fair quality of life (56 respondents (64.4%), and good quality of life (3.4%).

4) After conducting an analysis test using the chi-square test, there was a relationship between the level of depression and quality of life in pulmonary tuberculosis (TB) patients at Pakuhaji Regional Hospital, Tangerang Regency (p value = 0.001 ≤ 0.05).

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