

## Original Research Article

## Relationship between Sex and Length of Treatment on Stress in Pulmonary Tuberculosis Patients at Oesapa Health Center, Kupang City

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**Abstract: Background:** Pulmonary tuberculosis (TB) is an infectious disease that is still a major health problem in Indonesia. The duration of TB treatment is 6-8 months, the long treatment period for TB disease causes many TB sufferers to be lazy to do routine treatment because they feel bored, tired, saturated, and depressed, causing stress and ultimately treatment is not optimal. Stress that is not handled properly can have a negative impact. There are several things that affect stress in individuals. One that affects stress is gender. **Objective:** To analyze the relationship between sex and length of treatment on stress in pulmonary tuberculosis patients at Oesapa Health Center, Kupang City. **Methods:** This study was an observational analytic study with a cross sectional study design conducted on pulmonary tuberculosis patients at Oesapa Health Center, Kupang City by filling in the Kessler Psychological Distress Scale (K-10) questionnaire. The sample in this study was 30 people. This research was analyzed by univariate, bivariate using the Chi-Square test. **Results:** The results of the Chi-Square Tests showed a significant value between sex and stress of pulmonary TB patients at Oesapa Health Center with a value of  $p = 0.548$  or  $p > 0.05$ , a significant level between length of treatment and stress of pulmonary TB patients at Oesapa puskesmas =  $0.681$  or  $p > 0.05$ , which means that there is no relationship between length of treatment and stress in pulmonary TB patients at Oesapa puskesmas. **Conclusion:** There is no relationship between gender and length of treatment with stress in pulmonary tuberculosis patients at Oesapa Health Center.

**Keywords:** Gender, length of treatment, stress.

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### PRELIMINARY

Pulmonary tuberculosis (TB) is an infectious disease that is still a major health problem in Indonesia because it has a major impact on the decline in work productivity [1]. Tuberculosis (TB) is still a health problem for the whole world, both developed and developing countries. Based on data from the Central Statistics Agency of East Nusa Tenggara, the number of cases of pulmonary TB by Regency/City in East Nusa Tenggara Province in 2015-2018, the incidence of TB in Kupang City is quite high. One of the sub-districts in Kupang City with the highest incidence of pulmonary TB is Kelapa Lima District which is the working area of the Oesapa Public Health Center.

The duration of TB treatment according to WHO recommendations is 6-8 months, in the

pulmonary TB treatment phase, the long treatment period for TB causes many TB patients become lazy to take treatment regularly because they feel bored, tired, bored, and depressed, causing stress and eventually treatment is not optimal [7, 8].

Stress that is not handled properly can have a negative impact that can adversely affect the patient's own health [9]. There are several things that affect stress in individuals. One of the factors that influence stress is gender.

This is in line with previous research in 2016 with the title Relationship of Length of TB Treatment with Stress Levels of TB Patients at the Tambelangan Health Center, Sampang Regency with 39 respondents, the results showed that there was a relationship between

the length of TB treatment and the stress level of TB patients [2]. This research is in line with research conducted by Aliflamra in 2016 [5]. In 2018 Hendrawati, *et al.* conducted a study with the title factors related to the anxiety level of pulmonary TB patients at a hospital in Garut district with a sample of 54 people, a p value = 0.008 which stated that there was a relationship between sexes (pakai ini atau gender? and stress levels [11]. Previous research, the results of research conducted by Khotimah with the title Relationship of Long Treatment of Pulmonary TB with Stress Levels of Pulmonary TB Patients at the D'langgu Health Center, Mojokerto Regency, from 51 respondents after the p value was found to be 1,000 (0.05) so that it means there is no The Relationship between the Length of Pulmonary TB Treatment and the Stress Level of Patients with Pulmonary TB at the D'Langgu Public Health Center, Mojokerto Regency [12]. In 2017, a study was conducted by Nur Hafifah *et al.* They examined differences in academic stress in Nursing Science study program students based on gender, from 177 respondents it was found that p value (0.93)  $\geq$  0.05, which means there is no difference in

academic stress between men and women ( $\alpha = 0.05$ ) [6]. The results of another study conducted by Ramadhani, *et al* with the title Gender Relationship with Stress Levels in Adolescent High School Students in the City of Kediri in 2017 were 78 respondents, obtained p value = 0.390 so that it shows that there is no relationship between gender and the level of stress experienced by the respondents of high school students in the city of Kediri [10].

## RESEARCH METHODS

This research is an observational analytic study with a cross sectional research design conducted on pulmonary TB patients at the Oesapa Public Health Center, Kupang City by filling out the Kessler Psychological Distress Scale (K-10) questionnaire. The sample in this study was 30 people. This study was analyzed univariately, bivariately using the Chi-Square test.

## RESULT

**Table-1: Characteristics of respondents**

Variable	Frequency F (x)	percentage (%)
Gender		
1. Male	19	63.3
2. Female	11	36.7
Amount	30	
Age		
17-25	5	16.7
26-35	8	26.7
36-45	7	23.3
46-55	3	10
56-65	6	20
>66	1	3.3
Amount	30	

The results of the research that have been presented in table 1 show that the number of male respondents is more than female and the average age of

respondents is 26-35 years as many as 8 people (26.7%) and the age with the least sample is > 66 years. 1 respondent (3.3%).

**Table-2: Gender distribution of Pulmonary TB Patients at the Oesapa Health Center**

Gender	Frequency F (x)	Percentage (%)
Male	19	63.3
Female	11	36.7
Amount	30	100

**Table-3: Distribution of Treatment Duration of Pulmonary TB Patients at the Oesapa Health Center**

Treatment duration	Frequency f (x)	Percentage (%)
1-2 months	13	43.3
3-6 months	17	56.7
Amount	30	100

**Table-4: Stress Distribution of Pulmonary TB Patients at the Oesapa Health Center**

Stress	Frequency f (x)	Percentage (%)
No Stress	13	43.3
Mild Stress	3	10
Moderate Stress	4	13.3
heavy Stress	10	33.3
Amount	30	100

## DISCUSSION

**Table-5: The Relationship between Gender and Stress in Pulmonary TB Patients at the Oesapa Health Center**

Gender	Stress				Total	P value
	No Stress	Mild stress	Moderate stress	Heavy stress		
Male	10	2	2	5	19	0,548*
Female	3	1	2	5	11	
Total	13	3	4	10	30	

**Table-6: The Relationship between Treatment Duration and Stress in Pulmonary TB Patients at the Oesapa Public Health Center**

Duration of Treatment	Stress				Total	P value
	No Stress	Mild Stress	Moderate Stress	Heavy Stress		
1-2 months	7	1	2	3	13	0,681*
3-6 months	6	2	2	7	17	
Total	13	3	4	10	30	

From research conducted by researchers at the Oesapa Public Health Center, Kupang City, it was found that TB Patients, both male and female, were subjected to stress. The response of each individual, both male and female, has different response to stress, women are susceptible to stress due to the influence of hormones such as oxytocin, estrogen and sex hormones than men. Men are more active exploratory than women and men are supposed to be stronger than women [4], but in this study both men and women experienced stress, this can be accepted because of the way each individual handles stress are different.

From the results of the study in table 6, it can be concluded that there is no correlation between the variable length of treatment and the stress of pulmonary TB patients at the Oesapa Health Center. This is in line with the research conducted by Khotimah which showed that there was no relationship between the duration of pulmonary TB treatment and the stress level of pulmonary TB patients at the D'langgu Health Center, Mojokerto Regency [3].

TB treatment that every TB patient must undergo is a minimum of 6 months, during the treatment period, patients will also feel the side effects of drugs and also symptoms of TB disease that interfere with activities, this makes TB patients feel

uncomfortable and can be a big stressor that can trigger stress in TB patients.

From the research conducted, it was found that 6 respondents in the initial 1-2 month phase experienced stress and 11 respondents experienced stress in the 3-6 month follow-up treatment phase. This means that patients undergoing treatment in both the initial and advanced phases both prove to be experiencing stress, both the initial and advanced treatment phases as well as patients who do not experience stress, this is because each individual's stress coping strategy is different [2], if the individual faces stress with positivity, then they will be able to control their stress by being aware, accepting, then being able to deal with stress by acting can reduce stress on the individual [1].

## CONCLUSION

There is no significant relationship between gender and duration of treatment with the stress of pulmonary TB patients at the Oesapa Public Health Center.

## SUGGESTION

1. For health workers and health institutions to always pay attention to the treatment of pulmonary tuberculosis patients, especially paying attention to the

patient's psychological condition and counseling. For health institutions to ensure TB patients get BPJS services so that they can help patients in TB treatment.

2. For families of tuberculosis patients, paying more attention to the psychological condition of the patient and supporting the patient during the treatment period can also be carried out with a spiritual approach.

3. For further researchers, it is expected to conduct research on other factors related to stress such as age, education level, income level, level of medication adherence, quality of life, family support, social support, marital status in TB patients so that they can complete the results of this study.

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