

## Conference Paper

# The relationship of stress level and quality of life among patients with Tuberculosis in Makassar, Indonesia

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## Abstract

**Background:** Pulmonary tuberculosis is caused by Mycobacterium tuberculosis which can affect most organs of the body is the lungs. Chronic pain conditions tend to cause increased stress associated with decreased physical function, treatment and death threats. Physical, environmental and psychosocial conditions are factors that influence life quality of the patients. **Objectives:** the aim of this research was to find out the correlation of the stress level and life quality of the patients with pulmonary tuberculosis at Balai Besar Kesehatan Paru Masyarakat Makassar. **Method:** this is an analytical survey research that employed the approach of cross sectional study. The research was conducted in 21<sup>st</sup> of January to 7<sup>th</sup> of February 2019 at Balai Besar Kesehatan Paru Masyarakat Makassar. The sample was selected by using purposive sampling based on the inclusion and exclusion and as many as 37 samples were chosen as the respondents. The data were gathered by questionnaire, data collection instrument for stress level using DASS-14 and life quality using WHOQOL-BREF-26, then processed by SPSS and analyzed by statistical test of Kolmogorov Smirnov with the significance degree of 95% ( $\alpha=0,05$ ). **Result:** the result showed that the mild stress level and good life quality was found in 19 (79.2%) respondents, moderate stress level with good life quality was found in 3 (27.3%) respondents, severe stress level and good life quality was expressed in 0 (0.0%) respondent, mild stress level with bad life quality was found in 5 (20.8%) respondents, moderate stress level with bad life quality in 8 (72.7%) respondents, and severe stress level with bad life quality was 2 (100%) respondents. The test result of the value of  $p = 0.013$ , means the value of  $p$  was lower than  $\alpha = 0.05$ . **Conclusion:** there were associations between stress level and the life quality of the patients with pulmonary tuberculosis at Balai Besar Kesehatan Paru Masyarakat Makassar.

**Keywords:** Quality of life, stress level and pulmonary tuberculosis.

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## 1. Introduction

Tuberculosis (TB) lungs is an infectious disease caused by bacterial infection mycobacterium tuberculosis and has become global attention. A source of transmission of which is the patient tuberculosis basil is acid resistant positive through tiny sputum. The

issuance of Tuberculosis lungs with basil is acid resistant negative also still have the possibility of transmitting disease tuberculosis lungs although. Small level of exposure as not preclude the possibility the number of patients with tuberculosis lungs from year to year are growing increasingly. In 2016 tuberculosis lungs attack 10.4 million people in the world and cause of death on 1,4 million patients with tuberculosis lungs. India, Indonesia, and china is a country with tuberculosis sufferers lungs most namely, respectively with the number of cases 23 %, 10 %, and 10 % of all patients in the world [1].

World health organization global tuberculosis report, pulmonary tuberculosis (TB) is one of the 10 causes of death in the world [1]. Tuberculosis (TB) in South Sulawesi in 2015 was 153 / 100,000 people and where the city of Makassar occupied the first level in the number of cases with pulmonary tuberculosis [2]. BBKPM Medical Record report of Tuberculosis cases in 2017 there were 668 people and in 2018 (from January to September) as many as 227 people. Pulmonary tuberculosis is a disease that affects not only physical health, but also the psychological and social conditions. the patient's psychological and social impact is due to the stigma associated with pulmonary tuberculosis and changes in the attitudes of those around him. The impact of pulmonary tuberculosis can affect various life forms and cause a decrease in the quality of life of patients [3].

Based on the above background and the impact that will arise on patients with pulmonary tuberculosis (TB) will cause changes in stress levels with the quality of life of patients. So the aims of study is to identify the relationship between stress levels and quality of life for pulmonary tuberculosis patients at the Balai Besar Kesehatan Paru Masyarakat Makassar.

## 2. Methods

The research design used in this study was analytic survey. By using the Cross sectional study approach which is a form of observational (non-experimental) study to find the relationship between the stress level and quality of life lung tuberculosis patients. The population in this study were 41 patients and Sample in this study were 37 patients. The sample were selected by using purposive sampling technique.

This research was conducted at the DOTS Centre in Balai Besar Kesehatan Paru Masyarakat Makassar on 21 January – 7 February 2019. The data were gathered by questionnaire, data collection instrument for stress level using DASS-14 and life quality

using WHOQOL-BREF-26, then processed by SPSS and analyzed by statistical test of *Kolmogorov Smirnov* with the significance degree of 95% ( $\alpha=0,05$ ).

### 3. Results

TABLE 1: Distribution of Respondents Based on Stress Levels at the Balai Besar Kesehatan Paru Masyarakat Makassar in 2019.

Stress Level	n	%
Light	24	64.9
Medium	11	29.7
Weight	2	5.4
Total	37	100

Based on table 1, shows that of 37 proportion who suffered minor stress level was more dominant as much as 24 (64.9 %) respondents.

TABLE 2: Distribution of Respondents Based on Quality of Life at the Balai Besar Kesehatan Paru Masyarakat Makassar in 2019.

Quality Of Life	n	%
Good	22	59.5
Deficient	15	40.5
Total	37	100

Based on table 2 shows that of 37 the number of respondents, having the quality of life of more good dominant as many as 22 (59.5 %) of respondents.

TABLE 3: Relationship between Stress Levels and the Quality of Life of Lung Tuberculosis Patients at the Balai Besar Kesehatan Paru Masyarakat Makassar in 2019.

Stress Level	Quality Of Life				Total		P value
	Good		Deficient		n	%	
	n	%	n	%			
Light	19	79.2	5	20.8	24	100	0.013
Medium	3	27.3	8	72.7	11	100	
Weight	0	0.0	2	100	2	100	
Total	22	59.5	15	40.5	37	100	

Based on table 3 shows that of the 37 respondents who experience stress level lightly with good quality of life as much as 19 (79.2 %) respondents, than that experienced stress level lightly with quality of life needs to be as much as 5 (20.8 %) respondents. For the respondents who experience stress level got a good quality of life as much as 3 (27.3 %) respondents, than that experienced stress levels are less well with quality of life as much as 8 (72.7 %) Respondents, And the respondents who suffered under great stress level

with good quality of life as much as 0 (0.0 %), respondents than that experienced under great stress level with quality of life needs to be as much as 2 (100 %) respondents.

## 4. Discussion

The results of bivariate analysis obtained using the Kolmogorov Smirnov test obtained  $p$  value = 0.013 which means that there is a relationship between stress and the quality of life of pulmonary tuberculosis patients at the Balai Besar Kesehatan Paru Masyarakat Makassar. This is because the lighter the level of stress experienced by the patient, the better the quality of one's life. Because the level of stress experienced by patients is a mild level of stress so that patients are not too burdened with the disease. This is also because the patient considers that when a disease is overtaken on an ongoing basis it can make the patient's health more disturbed. This study also found respondents who experienced mild stress levels with poor quality of life. Based on the results of interviews this is caused by environmental factors or social factors because people assume that someone who is infected with pulmonary tuberculosis should be avoided so that patients are difficult to socialize [4].

Research conducted by [5] there are a significant relation exists between the level of the stress associated with the quality of life of patients tuberculosis in RSUP dr.Kariadi Semarang. While according to Suriya (2018), the results of the study found that there was a correlation depression with the quality of life of patients pulmonary tuberculosis at the hospital special makes the deep pulmonary in west Sumatra [6].

The stress is a reaction physical and psychological different on individuals and occurring in certain circumstances are threatening [7]. Stress an impact of overall at the impact on individual physical, social and psychological. Stress categorized there are three i.e stress light, medium and heavy. Light stressor stress is facing can run a few minutes or clock, stress lightly frequent the daily and usually not accompanied the emergence of symptoms. The rate of stress ongoing a few hours to some. Stress this could cause symptoms such as easily anger, offended, agitated. And stress weight is the situation long perceived by someone can last few weeks until a few months. More often and stress are more situation, the higher health risk posed This is in accordance with the opinion of Angriani in Octavianti (2013) [8], [9] that the factors that influence a person's quality of life are interpersonal conditions, including social relationships in the family. This study also found respondents who experience moderate-to-severe stress levels with good quality of life, this is because patients have the ability and opportunity

to deal with and control the conditions they experience, so that people can maintain their quality of life in a more positive direction.

This is also influenced by interpersonal factors, including social relations in the family. Because social support, family, relatives, and peers can make a person's quality of life good [10]. This study also found respondents who experienced moderate-to-severe stress levels with poor quality of life. This is because the patient does not have the ability to control the condition he experiences so that the patient is not able to maintain the quality of life.

The brief description above can be seen that in a situation or quality of life a person can be influenced by more than one factor. If in his life a person experiences a pressing situation or changes in conditions (becomes bad), but if he has the ability and opportunity to deal with and control the situation experienced, that person can maintain the condition of his quality of life in a more positive direction [11].

## 5. Conclusion

The stress level of patients in the Balai Besar Kesehatan Paru Masyarakat Makassar shows that the majority of respondents with a stress light with The quality of life of majority of respondents with the live either. There were associations between stress level and the life quality of the patients with pulmonary tuberculosis at Balai Besar Kesehatan Paru Masyarakat Makassar. As health workers should always give education to increase the motivation to patients order not to be easily stress and has a good quality of life.

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