

How Much Depressed are Lung Tuberculosis Patients in Tangerang, Banten Province, Indonesia?

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Abstract

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Introduction : Tuberculosis is an infectious disease caused by *Mycobacterium Tuberculosis* (MTB) and mostly attacks the lung and other organs. In patients with pulmonary tuberculosis, depression can occur and the factors that can cause it are age, sex, marital status, level of education, employment, long suffering from pulmonary tuberculosis and comorbidities. The purpose of this study is to show the prevalence and also degree of depression in patients with lung Tuberculosis in Tangerang, Banten Province, Indonesia.

Methods : The study design is cross sectional by asking participants to fill Zung Self-Rating Depression Scale that have been translated to Indonesian language. Participants were 129 patients with lung tuberculosis in Siloam General Hospitals Lippo Karawaci, Puskesmas Kutai and Puskesmas Curug.

Results : Mean age of the 137 patients with lung tuberculosis is 47.73 ± 8.50 years old, and the mean of their height and weight are 163.94 ± 7.59 centimeters and 51.10 ± 7.40 kilograms. More than a half of the patients are male (69%), almost a half of the patients are low educated (48%) and almost all of the patients have been married (93.8%). More than a half of the lung tuberculosis patients experience depression (70,5%). Approximately a half of the lung tuberculosis patients are having mild depression (50.4%). There is 1 patient is having severe depression (0.8%).

Conclusion : Degree of depression in adult patients suffer from lung Tuberculosis in Tangerang, Banten Province, Indonesia is high. More than a half of adult lung Tuberculosis patients are having depression. Depression is one of problems that should be concerned and also treated in patients with lung tuberculosis. Psychiatrist involvement in managing patients with lung tuberculosis is needed.

Introduction

Tuberculosis (TB) is an infectious disease that caused by *Mycobacterium tuberculosis* and cause many deaths worldwide. According to World Health Organization (WHO) Global Tuberculosis Report 2017, TB cause 1,3 million deaths among people without Human Immunodeficiency Virus (HIV) infection and 374.000 deaths among people with HIV. WHO also reported that TB reach ninth position as the leading cause of Many efforts have been done to increase adherence to tuberculosis treatment, but

death worldwide. This rank is above HIV⁽¹⁾.

An estimated 10.4 million people suffered from TB in 2016⁽¹⁾. South-East Asia Region ranks 1st with the highest number of cases (45%) followed by African region (25%), Western Pacific Region (17%), and others (13%). Indonesia accounted a total of 360,565 of the TB cases. It shows increasing incidence when compared to reported cases from 2015⁽²⁾.

the default from tuberculosis treatment is still high ⁽³⁾. Psychopathology is the major

burden for treating lung tuberculosis patients because it will greatly reduce patient's adherence to the long - term tuberculosis treatment. Patchi., et al 2013⁽⁴⁾, wrote that one of psychiatric problems that usually suffered by tuberculosis patients is mood disturbance including depression. Depression and anxiety can be found in 46 % - 72% of tuberculosis patients ⁽⁴⁾. Depression often coexist with TB ⁽⁵⁾. The prevalence of depressive episode among TB patients from the data of World Health Survey was 23.7%⁽⁶⁾. Additionally, in research conducted by Nahda., et al 2017⁽⁷⁾, 51.9% of TB patients experienced depression from 27 patients in Semarang, Indonesia. Research to find the prevalence and degree of depression experienced by patients with lung tuberculosis in Tangerang, Banten Province, Indonesia has not been done before. Knowledges about the prevalence and degree of depression that are suffered by lung tuberculosis patients in Tangerang, Banten Province can be used as a specific foundation to recommend the involvement of psychiatrists or psychologists in managing tuberculosis patients in order to increase treatment adherence and achieve successful treatment in tuberculosis patients.

Materials and Methods

This study was approved by Pelita Harapan University Ethical Committee. The study design of this study is cross sectional by asking participants to fill Zung Self-Rating Depression Scale that have been translated to Indonesian language. Participants included were 129 lung tuberculosis patients in Siloam General Hospitals Lippo Karawaci, Puskesmas Kutai and Puskesmas Curug. Informed consents were given and Zung Self-Rating Depression Scale questionnaires were

filled by patients that have agreed to be participated in this study.

Inclusion criteria for the patients included in this study are 17 – 66 years old male or female patients with lung tuberculosis who stay in Tangerang and are receiving Tuberculosis drugs regimen therapy. Exclusion criteria in this study are male or female patients who did not agree to participate in this study, and also pregnant female patients.

Other data collected from the patients were gender, age, weight, height, educational status, and marital status. All data collected by interviewing the patients.

Data were analysed using IBM SPSS Statistics version 23. Numeric variable were presented as average and standard deviation and categoric variable were presented as percentage.

Results

Mean age of the 137 patients with lung tuberculosis is 47.73 ± 8.50 years old, and the mean of their height and weight are 163.94 ± 7.59 centimeters and 51.10 ± 7.40 kilograms. More than a half of the patients are male (69%), almost a half of the patients are low educated (48%) and almost all of the patients have been married (93.8%). For complete proportion please see table 1 and table 2.

Screening process using Zung Self-Rating Depression Scale shows that more than a half of the lung tuberculosis patients experience depression (70,5%). Approximately a half of the lung tuberculosis patients are having mild depression (50.4%). There is 1 patient is having severe depression (0.8%). (See table.3).

Table 1. Physical Characteristics of Patients with Lung Tuberculosis

Characteristics	N	Mean	SD	Minimum	Maximum
Age (years)	129	47.73	8.50	22	66
Height (cm)	129	163.94	7.59	143	190
Weight (kg)	129	51.10	7.40	34	94

Table 2. Demographic of Patients with Lung Tuberculosis

Sex		
Male	89	69.0%
Female	40	31.0%
Educational Status		
Low	62	48.1%
Middle	46	35.7%
High	21	16.3%
Marital Status		
Married	121	93.8%
Single	8	6.2%

Table 3. Degree of Depression

Degree of Depression	N	(Percent)
Normal	38	(29.5)
Mildly Depressed	65	(50.4)
Moderately Depressed	25	(19.4)
Severely Depressed	1	(0.8)
Total	129	(100.0)

Discussion

Some psychiatric problems experienced by patients with tuberculosis are mood disorders (e.g. major depression), and anxiety disorder. Prevalence of depression and anxiety in tuberculosis patients are 46% - 72%. The more serious patient's clinical condition, the prevalence of depression and mood disorder will be increased⁽⁴⁾. In this research we found that 70,5% of the lung tuberculosis patients in Tangerang, Banten Province, experience depression. Approximately a half of the lung tuberculosis patients are having mild depression (50.4%) and there is 1 patient is having severe depression (0.8%). The prevalence is almost the same with that have been found in the previous research in Athens.⁴ This result is also similar to research results in Pakistan⁽⁸⁾ and Semarang⁽⁷⁾ where more than half of tuberculosis patients experienced depression.

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Psychosocial and psychiatric complication will increase default in tuberculosis treatment⁽⁹⁾. Psychopathology is the major burden for treating lung tuberculosis patients because it will greatly reduce patient's adherence to the long - term tuberculosis treatment⁽⁴⁾. In our research we found that the prevalence of depression is high in tuberculosis patients in Tangerang, Banten Province. Psychiatrists and psychologists should be involved to treat the psychiatric problems in tuberculosis patients in order to reduce default in long term tuberculosis treatment. Psychiatrists and psychologists should be involved from the beginning of the treatment and followed by monthly evaluation⁽⁹⁾.

The limitations of this research are 1) only 3 centres involved, Siloam General Hospitals Lippo Karawaci, Puskesmas Kutai and Puskesmas Curug, 2) although it is a self-reported questionnaire, the Zung questionnaires in this research administrated by medical students, not by psychologists nor psychiatrist, and 3) the Zung questionnaires in this research administrated at clinics and hospitals environment, not at quiet and special designated environment.

Conclusion

More than a half of the lung tuberculosis patients experience depression in Tangerang, Banten province. High prevalence of depression will make the default risk in tuberculosis treatment also higher. Psychiatrists and psychologists should be involved to treat the psychiatric problems in tuberculosis patients.

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