

The Relationship between Level of Knowledge and Anxiety in Patients with Pulmonary Tuberculosis with Coughing up Blood

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Abstract:-

Introduction: Knowledge is the impression in the human mind as the use of the five senses. Pulmonary TB is caused by *Mycobacterium tuberculosis* bacteria that attack the lungs, one of the causes of anxiety in patients with pulmonary TB with coughing up blood is knowledge. Anxiety level is a feeling of fear that is not clear and not supported by the situation. The results showed that there was a relationship between the level of knowledge and anxiety in patients with pulmonary TB with coughing blood at the Dukun Gresik health centre. **Methods:** This research design is analytic with a cross sectional approach. The purpose of the study was to determine the relationship between the level of knowledge and anxiety in patients with pulmonary TB with coughing blood at the Dukun Gresik health centre. The population taken all patients with pulmonary TB coughing up blood who examined at the health centre dukun the number of samples of this study was 24 people at the health centre dukun gresik using purposive sampling technique. Data collected through questionnaire sheets were then analysed with the congestion coefficient test with a significance level of $\alpha = 0.05$. **Results:** from the results of the statistical test of the coefficient of congestion based on significance ($\alpha = 0.05$), the results obtained the value of $\rho < \alpha$ ($0.004 < 0.05$) which means that H1 is accepted, meaning that there is a relationship between the level of knowledge and anxiety in patients with pulmonary tuberculosis with coughing blood in the health centre dukun sub-district dukun gresik district. The results showed that there was a relationship between the level of knowledge and anxiety in patients with pulmonary TB with coughing blood at the Dukun health centre in Gresik. **Conclusion:** almost entirely the level of knowledge is moderate and most experience mild anxiety levels so that there is a relationship between the level of knowledge and anxiety in patients with pulmonary TB with coughing blood. It is recommended for health workers to be more active in conducting counseling and socialisation on this subject to minimise anxiety in patients with pulmonary TB with coughing up blood.

Keywords:- Level of knowledge, anxiety, pulmonary TB.

I. INTRODUCTION

Pulmonary TB is an infectious disease caused by *Mycobacterium tuberculosis* that can affect various organs, especially the lungs, with varying symptoms (junaidi, 2010). Pulmonary TB is estimated to infect one-third of the world's population with an incidence of approximately 95% occurs in developing countries. (Aditama, et al, 2007). *Mycobacterium* will die if exposed to direct sunlight. However, these bacteria can survive for a long time in a dark and humid place (Erlin, 2008). Tuberculosis (TB) is still a global health problem, especially in developing countries. Indonesia as one of the developing countries in this regard is ranked in the top three after India and China. (WHO, 2010).

In Indonesia, the TB case finding rate in 2010 reached 78.3% and in 2011 reached 82.20% (Health Profile, 2011). The number of patients with all TB cases in Indonesia in 2011 reached 302,861 patients, in East Java reached 37,511 patients (depkes, 2011). In 2010 the number of TB cases was 37,226 patients and 23,223 of them were BTA positive pulmonary TB (East Java Provincial Health Office, 2011). Factors that influence the occurrence of pulmonary TB include socioeconomic conditions, age, gender, nutritional status and smoking habits.

Although smoking is not the main cause of Lung TB disease, smoking can damage the lung's defence mechanisms, making it easier for germs such as TB germs to enter. In addition, the phenomenon of smoking in Indonesia is still considered normal, even considered a lifestyle. Smoking behaviour is common for most Indonesians, especially adult men especially adult men. In the last ten years, cigarette consumption in Indonesia has increased by 44.1% and the number of smokers has reached 70% of the Indonesian population. (Fatmawati, 2006).

With the high incidence rate and the ease with which this disease is transmitted, we must increase knowledge to the community, especially sufferers by providing health education or counselling about the disease, especially how it is transmitted and prevention of transmission and treatment.

II. MATERIALS AND METHODS

This type of research is analytic correlation with cross sectional approach. The sample size was 24 respondents taken by purposive sampling who met the inclusion criteria: patients with pulmonary TB with coughing up blood who were willing to become respondents, 2. Patients with pulmonary TB with coughing up blood who came to the

puskesmas dukun. The instrument in this study was a questionnaire. Questionnaires were distributed to patients with pulmonary TB with coughing blood who came to the health centre. For scoring the results of data collection were given a scoring value. For knowledge level: good knowledge if the correct answer is > 6 , moderate knowledge

if the correct answer is 4-5, poor knowledge if the correct answer is < 4 . For anxiety, if the score < 6 there is no anxiety, if the score is 6-14 mild anxiety, if the score is 15-27 moderate anxiety, if the score is > 27 severe anxiety. From the results of the study it can be concluded that H_0 is accepted $\rho > \alpha$ and H_0 is rejected if $\rho < \alpha$.

III. RESULTS

A. Distribution of respondents based on gender.

Table 1: Distribution of respondents based on gender at the health centre dukun gresik, 2013

No	Gender	Total	Percentage (%)
1.	Female	9	37,5
2.	Male	15	62,5
	Total	24	100

From table 4.1 it is known that most of the respondents were male, namely 15 respondents (62.5%). And almost half of them, namely 9 respondents (37.5%) are female.

B. Distribution of respondents by age

Table 2: Distribution of respondents by age at the health centre dukun gresik, 2013.

No	Age	Total	Percentage (%)
1.	18-25 th	6	25
2.	26-40 th	10	42,2
3.	41-50 th	6	25
4.	> 50 th	2	8,3
	Total	24	100

From table 2 it is known that most of the respondents were aged 26-40 years, namely 10 respondents (42.2%). And a small proportion of respondents, namely 2 respondents (8.3%) aged > 50 years.

C. Distribution of respondents based on education

Table 3 Distribution of respondents based on education at puskesmas dukun gresik, 2013

No	Education	Total	Percentage (%)
1.	Not In School	2	8,3
2.	Primary School	11	45,8
3.	Junior High School	3	12,5
4.	High School	5	20,9
5.	Higher Education	3	12,5
	Total	24	100

From table 3 it is known that almost half of the respondents have elementary school education, namely 11 respondents (45.8%). And a small proportion of respondents, namely 2 respondents (8.3%) did not attend school.

D. Distribution of respondents based on occupation

Table 4: Distribution of respondents based on occupation at dukun gresik health centre, 2013

No	Occupation	Total	Percentage (%)
1.	Civil Servant	3	12,5
2.	Farmer	11	45,8
3.	Private	7	29,2
4.	Self-Employed	2	8,3
5.	Other	1	4,2
	Total	24	100

From table 4 it is known that almost half of the respondents work as farmers, namely 11 respondents (47.8%). And a small proportion of respondents as many as 1 respondent (4.3%) work as others.

➤ *Specialised Data*

- Knowledge level

Table 5: Distribution of respondents based on the level of knowledge in patients with pulmonary tuberculosis with coughing blood at the health centre dukun gresik, 2013

Knowledge	Total	Percentage (%)
High	2	8,3
Medium	17	70,8
Less	5	20,9
Total	24	100

Based on table 5 shows that almost all respondents, namely 17 respondents (70.8%), had a moderate level of knowledge, and a small proportion of respondents, namely 2 respondents (8.3%), had a high level of knowledge.

- Anxiety level

Table 6: Distribution of respondents based on the level of anxiety in patients with pulmonary tuberculosis with coughing blood at the health centre dukun gresik, 2013

Anxiety	Total	Percentage (%)
No anxiety	0	0
Mild anxiety	11	45,8
Moderate anxiety	8	33,3
Severe anxiety	5	20,9
Total	24	100

Table 6 shows that almost all respondents experienced mild anxiety, namely 11 respondents (45.8%). And a small proportion of respondents, namely 5 respondents (20.9%) experienced severe anxiety.

- Relationship between Knowledge Level and Anxiety in patients with Pulmonary TB with coughing blood at Puskesmas Dukun Gresik Regency.

Table 7: Relationship between Knowledge Level and Anxiety in patients with Lung TB with coughing blood at Puskesmas Dukun Gresik Regency

Level of knowledge in TB patients with coughing up blood	Anxiety level in patients with pulmonary TB with coughing up blood								Total	%
	No anxiety		mild		moderate		severe			
High	0	0	2	8,3	0	0	0	0	2	100
Medium	0	0	9	37,5	7	29,2	1	4,2	17	100
Less	0	0	0	0	1	4,2	4	16,6	5	100
Total	0		11		8		5		24	100

Contingency coefficient test results: $p = 0.004$

Table 7 shows that based on the results of the research that has been discussed, the researchers concluded that respondents with high knowledge experienced mild anxiety as many as 2 (8.3%) respondents. Moderate knowledge as many as 17 respondents, experienced mild anxiety 9 (37.5%) respondents, experienced moderate anxiety 7 (29.2%) respondents, experienced severe anxiety 1 (4.2%) respondents. Less knowledge as many as 5 respondents, 1 (4.2%) respondent experienced moderate anxiety, experienced severe anxiety 4 (16.6%) respondents. From the results of the correlation test using the contingency coefficient test with the help of SPSS 20.0 with $\alpha = 0.05$, the results obtained $\rho = 0.004$, namely $\rho < \alpha$ ($0.05 > 0.004$) which means H_0 is rejected H_1 is accepted, meaning that there is a relationship between the level of knowledge and the level of anxiety in patients with pulmonary TB with coughing blood. Thus stating that there is a relationship between the level of knowledge with the level of anxiety in

patients with pulmonary TB with coughing blood at Puskesmas Dukun Gresik District.

IV. DISCUSSION

Pulmonary tuberculosis is an infectious disease caused by the bacteria *Mycobacterium tuberculosis*. One of the symptoms that often appear in patients with pulmonary tuberculosis is coughing up blood. Coughing up blood can cause anxiety in patients, as it is often considered a sign of disease severity. In addition, the patient's level of knowledge regarding pulmonary tuberculosis and its symptoms can also affect the patient's response to their health condition.

Pulmonary tuberculosis is a global health problem that remains a major concern in many countries. The incidence of coughing up blood in patients with pulmonary tuberculosis can cause significant concern and anxiety. Therefore, it is important to understand the relationship between patients' level of knowledge about the disease and

their level of anxiety related to symptoms, particularly coughing up blood.

This study aims to explore the relationship between pulmonary tuberculosis patients' level of knowledge and their level of anxiety related to the symptom of coughing up blood. With a better understanding of these factors, it is hoped that more effective management approaches can be developed to improve quality of life and disease management in patients.

This study is expected to contribute to our understanding of the relationship between the level of knowledge of pulmonary tuberculosis patients and their level of anxiety related to symptoms of coughing up blood. The results of this study can be used as a basis for the development of educational interventions aimed at improving patient knowledge and reducing anxiety associated with disease symptoms.

By understanding the relationship between knowledge level and anxiety in pulmonary tuberculosis patients with coughing up blood, it is hoped that more effective strategies can be found in disease management and improving patients' quality of life. This study contributes to the health literature and can serve as a basis for further research in this field.

V. CONCLUSION

Based on the results of the research conducted, it can be concluded as follows:

- Almost entirely the level of knowledge in patients with pulmonary TB with coughing up blood at the puskesmas of the dukun sub-district of the gresik district is moderate anxiety.
- Most of the anxiety levels in patients with pulmonary TB with coughing up blood at the sub-district health centre dukun gresik district is mild anxiety.
- There is a relationship between the level of knowledge and anxiety in patients with pulmonary TB with coughing up blood at the sub-district health centre in Dukun, Gresik Regency.

VI. SUGGESTION

Do not feel ashamed or afraid of the disease they suffer, take better care of their nutritional needs, and it is hoped that more information will be provided to people with pulmonary TB with coughing blood, how to overcome the problems experienced so that people with pulmonary TB with coughing blood do not experience anxiety and anxiety when experiencing pulmonary TB with coughing blood..

REFERENCES

- [1]. Alimul, Aziz. 2007. Nursing research and scientific writing techniques. Jakarta: Salemba Medika.
- [2]. Arikunto, S. (2006). Research Procedures An Approach to Practice Revised Edition VI. Jakarta: Rineka Cipta
- [3]. Fatmawati. 2006. Smoking Hazard Material for School Curriculum. (Online), (<http://www.sinarharapan.co.id/berita/0609/15/opi01.html>, 25 January 2008) in Smoking Behaviour Among Students of Muhammadiyah University of Semarang (Smoking Behaviour Among
- [4]. Gail W. Stuart. 2007. Mental nursing 5th edition: EGC Medical Book Publishing Company
- [5]. Junaidi, Iskandar. 2010. Lung and respiratory diseases. Jakarta: PT BhuanAllmuKomputer.
- [6]. Indonesian Ministry of Health. (2010). Tuberculosis is Still an Important Health Problem in the World and in Indonesia.
- [7]. Indonesian Ministry of Health. (2011). Indonesia Health Profile 2010. Jakarta: Ministry of Health.
- [8]. Indonesian Ministry of Health. (2012). Indonesia Health Data 2011. Jakarta: Ministry of Health.
- [9]. Mubarak, Wahid. 2009. Public health science. Jakarta: Salemba Medika.
- [10]. Misnadiarly. (2006). Infectious Diseases of Pulmonary and Extra Pulmonary TB: Knowing, Preventing and Overcoming Pulmonary TB in Children in Pregnancy. Jakarta: Obor Popular Library.
- [11]. Notoatmodjo, soekodjo. 2006. Psychology and development. Bandung: PT. RemajaRosda Karya
- [12]. Notoatmodjo, soekodjo. 2010. Health research methodology. Jakarta: PT Rineka Cipta.
- [13]. Nursalam, M Nurs. 2008. Nursing Management. Jakarta: Salemba Medika.
- [14]. Rahman (2007). Factors Associated with Tuberculosis in Pare City Hospital, in the Journal of Scientific Documentation and Information Centre (PDII).Edition V. Year 2007
- [15]. Setiadi. 2007. Concepts and research of nursing research. Yogyakarta: Grahallmu.