

A Review: Knowledge and Attitude of Society toward Tuberculosis Disease in Soppeng District

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ABSTRACT

Background: Pulmonary tuberculosis is a directly infectious disease caused by Tuberculosis (*Mycobacterium tuberculosis*). In Indonesia, Pulmonary Tuberculosis has been a significant public health problem with the number of sufferers, around 10% of the total number of people. Based on data from the World Health Organization (WHO) in 2017 that 10 million people fall ill with TB, and Tuberculosis (TB) is one of the top 10 causes of death worldwide.

Objective: This study aims to assess the knowledge and attitudes of the community about pulmonary tuberculosis in the working area.

Method: This study used an observational cross-sectional research design to find out the description of people's knowledge and attitudes about Tuberculosis and conducted in the working area of Salotungo Health Center, Malaka Health Center, and Panincong Health Center, Soppeng District, South Sulawesi. Primary data was obtained through 110 respondents by filling out questionnaires and giving responses by answering questions about knowledge and attitudes about efforts to prevent transmission of pulmonary TB disease.

Result: Among all the respondents, it can be seen based on sociodemographic characteristics. Out of 110 respondents, most of them are female as many as 67 respondents, while men are 43

respondents. An overview of the features of respondents from this study also shows where they got information about pulmonary TB. Respondents consider the environment to be wrong, and the factor of malnutrition is not something that can aggravate the patient's condition. It showed that the respondent's correct answers, below 50%, respectively.

Conclusion: Useful knowledge is expected to prevent and cope with pulmonary TB disease. The higher the education then it will contribute to shaping good attitudes and behavior

Keywords: Tuberculosis; *Myobacterium tuberculosis*; Knowledge; Attitude; Working area

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INTRODUCTION

Pulmonary tuberculosis is a directly infectious disease caused by Tuberculosis (*Mycobacterium tuberculosis*). In Indonesia, Pulmonary Tuberculosis has been a significant public health problem with the number of sufferers, around 10% of the total number of people with pulmonary tuberculosis in the world. It is the 3rd largest in the world after India and China.¹ Even though the incidence of tuberculosis (TB) has decreased worldwide, it remains a global health challenge.¹ An estimated 10.4 million people developed TB in the year 2015.

Pulmonary Tuberculosis (pulmonary TB) is a disease caused by *Mycobacterium tuberculosis* Acid Resistant (BTA), and TB is a deadly contagious disease and most often manifests in the lungs. *Mycobacterium* is transmitted through droplets in the air so that a patient with pulmonary tuberculosis is the cause of pulmonary tuberculosis transmission in the population in the vicinity. Clinical symptoms may include coughing continuously and phlegm for 3 weeks or more, sputum mixed with blood (hemoptysis), shortness of breath and pain in the chest, weak body, loss of appetite and weight loss, discomfort (malaise), night sweats without activities and fever chills more than one month.^{2,3} Tuberculosis is a major global health problem with an incidence of one million deaths per year throughout the world. Tuberculosis (TB) is one of the deadliest infectious diseases in the world. Based on data from the World Health Organization (WHO) in 2017 that 10 million people fall ill with TB, and

Tuberculosis (TB) is one of the top 10 causes of death worldwide.¹

In South Sulawesi, according to the Indonesian Health Profile data, 2017 the highest number of new cases was 1,461 cases (20.46%) in the 45-54 year age group, 1,306 cases (18.29%) in the 25-34 year age group and 1,302 cases (18.23%) in the age group of 35-44 years. Based on these data, it appears that Tuberculosis is a very worrying condition.²

For the prevention of tuberculosis, efforts are made by breaking the chain of transmission, rapid diagnosis, infection control, and effective treatment is critical. In general, it is assumed that the public knows about tuberculosis in the hope of preventing the transmission of Tuberculosis cases. However, reality shows that people do not always have enough knowledge or a positive and appropriate attitude in the prevention and treatment of tuberculosis.³ Knowledge is essential in providing insight into the attitudes and actions of a person. It is a crucial factor for the formation of a person's actions (over behavior).^{4,5,6}

A study conducted by Hussein et al. demonstrated that 53% of respondents who have less knowledge about Tuberculosis, and only 63% of respondents had a positive attitude towards Tuberculosis. This study illustrates that there is still low public knowledge about TB.⁴ Another study conducted by Fauzi et al. stated that only 20% of respondents had a good experience of TB, and respondents with less knowledge of 50% and 82% of respondents with the lack of knowledge had less tuberculosis prevention efforts as well.⁵ Whereas the

research conducted by Saflin shows that there is a difference in knowledge and prevention measures for transmission of pulmonary TB in families with household contact.⁶ Tuberculosis prevention programs require community participation because Tuberculosis problems are very much influenced by people's knowledge and behavior.⁷ Community knowledge about pulmonary TB has an effect on the risk of disease transmission to society. It is not only an individual issue, but it is a community problem, which is related to the economic issues of individuals, families, communities, companies, and countries.^{7,8} A low level of knowledge leads to poor health behavior and encourages disease transmission.⁹ Notoatmodjo A person's knowledge and understanding of tuberculosis and prevention of transmission play an essential role in the success of efforts to prevent transmission of tuberculosis.⁸ The World Health Organization (WHO), together with the Stop TB Strategy, created the Advocacy, Communication and Social Mobilization (ACSM) in 2006¹⁰ with the purpose of making the population aware of TB and stimulating community participation in health control.^{11,12} Literature indicates that TB control can significantly be enhanced if more concern is given to improve knowledge and attitudes towards diseases.^{13,14,15}

RESEARCH METHOD

This study used an observational cross-sectional research design to find out the description of people's knowledge and attitudes about Tuberculosis. This research was conducted in the working area of Salotungo Health Center, Malaka Health Center, and Panincong Health Center, Soppeng District, South Sulawesi. Primary data was obtained through 110 respondents by filling out questionnaires and giving responses by answering questions about knowledge and attitudes about efforts to prevent transmission of pulmonary TB disease.

RESEARCH RESULTS

Based on Table 1, respondents can be seen based on sociodemographic characteristics. Out of 110 respondents, most of them are female as many as 67 respondents (60.9), while men are 43 respondents (39.1%). Based on the characteristics of age, respondents were dominated by the age group 20-40 years as many as 62 people (56.3%), there are only five people over the age group of 60 years. Based on the type of most occupation from the group of housewives with the number 31 people (28.2%). Respondents who work as ASN as many as 23 people (20.9%) and those who are unemployed as much as 15%.

Table 1: Respondents' Characteristics

Characteristic	Total (n=110)	Percentage
Sex		
Female	67	60,9
Male	43	39,1
Age		
< 20 years old	4	3,6
20-40 years old	62	56,3
40-60 years old	39	35,5
> 60 years old	5	4,6
Occupation		
Unemployed	15	13,6
ASN	23	20,9
Farmer	19	17,3
Housewife	31	28,2
Private	22	20
Education		
No School	21	19,1
Low Education	27	24,5
Intermediate Education	51	46,4
High Education	11	10
Suffers pulmonary TB		
Husband / Wife	7	6,4
Parents	7	6,4
Other Families	11	10
Neighbour	9	8,2
None	76	69
Source of Information		
Health Worker	35	31,8
Family	15	13,6
Electronic Media	6	5,5
Others	40	36,4
None	14	12,7

Based on the highest level of respondent's education, namely in the group with the secondary school as many as 51 people (46.4), respondents with higher education are 11 people (10%), respondents with low literacy are 21 people (24.5%) and respondents who do not attend school as many as 21 people (19.1%). Family members who had or currently suffering from pulmonary TB are 34 people (31%), and 76 (69%) family members had never had pulmonary TB. Of the respondents studied, there are seven people (6.4%) whose husbands/wives had / currently suffers pulmonary TB while, as many as seven people (6.4%) mentioned their parents as

pulmonary TB sufferers. An overview of the characteristics of respondents from this study also shows where they got information about pulmonary TB. The most significant source of data according to respondents mentioned other sources as many as 40 people (36.4%), then health workers as many as 35 people (31.8%), and there are 14 people (12.7%) who said they had never heard at all information about pulmonary TB from any source.

Based on the respondent's specific data, it was very varied from some of its sociodemographic characteristics.

Table 2: Knowledge Distribution of Respondents About Pulmonary Tuberculosis

No.	Knowledge	Correct Answer	Incorrect Answer
1.	The cause of Tuberculosis is bacteria	94	16
2.	Typical symptoms of pulmonary TB disease is coughing up phlegm for more than three weeks,	62	48
3.	A typical symptom of pulmonary TB disease is cough accompanied by blood	87	23
4.	Typical symptoms of pulmonary TB disease are night sweats without activity	37	73
5.	The typical symptom of pulmonary TB disease is a decrease in body weight	43	67
6.	Pulmonary TB can spread through sputum splashes when coughing	101	9
7.	Smoking habits can worsen the health of people with pulmonary TB	78	32
8.	An unhealthy environment can worsen the health of people with pulmonary TB	42	68
9.	Lack of nutrition can worsen the health of people with pulmonary TB	46	64
10.	The behavior of cough Patients with pulmonary TB by closing their mouth when coughing is a preventative effort	98	12
11.	People with pulmonary TB must use a mask to prevent transmission	59	51
12.	Pulmonary TB can be cured by treatment for six months	98	12
13.	Taking TB medication may not be according to the instructions of the health worker	78	32
14.	Stop taking drugs can cause drug-resistant TB disease	32	78
15.	Drug-resistant TB is the same as regular TB	93	17
16.	Drug-resistant TB can be deadly	57	53

Based on the several questions in Table 2, the respondents' knowledge of pulmonary tuberculosis varies considerably. Some problems can be answered correctly, even though there were still questions that weren't correctly answered. It can be seen in the issue of typical symptoms of pulmonary tuberculosis is a cough with blood with quite a lot of respondents who gave the correct answer, namely 87 respondents (79.1%). Still, it is different from the question about the typical symptoms of night sweats even without physical activity; only 37 people (33.6%) answered correctly. Some items that gave fewer results were those that can worsen the health of TB patients. Respondents consider the environment to be wrong, and the factor of malnutrition is not something that can aggravate the patient's condition.

This can be seen from the respondent's correct answers, below 50%, respectively.

On the question of prevention efforts, as many as 98 people (89%) respondents in general already knew how to cough correctly by covering their mouths using their hands. The use of masks as a prevention effort is correctly answered only by 59 respondents (53.6%). The question about drug-resistant TB turns out that very few respondents know accurately. For an item that causes drug-resistant tuberculosis, only 32 people (29%) answer correctly. It shows that respondents, in general, do not know about immune Tuberculosis drugs that we can understand with MDR-Tb (Multiple Drug Resistance-Tuberculosis). Respondents considered that the resistant TB drug was the

same as regular TB, this was seen from the answers of respondents as many as 93 people who answer correctly

Table 3: Distribution of Respondents' Attitudes Towards Pulmonary Tuberculosis

No.	Attitude	Yes	No
1.	If there are people in the community who suffer from TB, then we recommend treatment to the health center	90	20
2.	If there is a family member who suffers from pulmonary TB, then we recommend the closest family to check themselves into the care center	100	10
3.	I don't need to tell other people to go to Health Centers if they live with TB patients, because it doesn't concern me.	75	35
4.	TB counseling needs to be done by health workers	105	5
5.	TB is a shameful disease, so if a family is suffering from TB, it should not be necessary to take it to a health center	57	53

Table 3 shows that of 110 respondents, almost all had a positive attitude towards pulmonary tuberculosis. This can be seen from the standpoint of 100 respondents to the decision making to immediately check themselves out if someone who suffers from TB directly visits the nearest health care facility. In addition, the results of data obtained from respondents also show that of 105 respondents who expected health workers to conduct health education related to pulmonary tuberculosis,

DISCUSSION

Pulmonary tuberculosis in Indonesia is one of the national priorities for disease control programs because it has a broad impact on the quality of life and economy, and often results in death.^{16,17} Tuberculosis prevention from now on referred to as TB prevention, is all health efforts that prioritize promotive and preventive aspects without ignoring curative and rehabilitative aspects.^{18,19}

This study aims to assess the knowledge and attitudes of the community about pulmonary tuberculosis in the working area of Salotungo Health Center, Malaka Health Center, and Panincong Health Center, Soppeng District, South Sulawesi. In terms of TB knowledge, the majority of respondents in this study knew that pulmonary TB was caused by bacteria and is a contagious disease. This is following the explanation in the TB Prevention Guidelines, which states that pulmonary tuberculosis is an infectious disease caused by the Mycobacterium TB bacteria.^{20,21} In general, the respondents, in this case, the general public, have a lot to know about Tuberculosis, both the cause, the transmission, and prevention. This is probably due to the increasing health system efforts in controlling TB infection in Health center facilities.^{22,23}

Although the majority of respondents already knew about TB in general, we can find that there are some unclear questions remain. Based on the results of the study, sub-knowledge categorized as lacking, namely risk factors and drug-resistant Tuberculosis.²⁴ Most respondents consider that environmental factors do not influence TB, and the condition of the nutritional status of patients has nothing to do with the incidence of TB.²⁵ The results of this study are in line with the research conducted in Ethiopia by Mengistu Lebesse that 95.6% of the residents of Dubti and Amibara, Ethiopia, do not have accurate information about

the causes and risk factors for TB. The majority of respondents in the study answered the causes of TB were cold air, dust, and smoking habits.^{13,26} It is also has been explained by the study from the research conducted by Tilahun, that majority of the respondents supposed mostly either cold air or smoking as a cause of TB.^{24,27}

The low level of knowledge about environmental factors and nutritional status as a risk factor can be caused by the limited delivery of information from health workers.^{28,29} This lack of knowledge causes a delay in health-seeking behavior, which in turn presents ample time for an infection to spread to the healthy population and poses a formidable challenge towards controlling the disease.³⁰ There is still a lot of focus on counseling in the field only around the symptoms and treatment of TB alone. Counseling is an effort to increase knowledge about the problem surrounding TB, not only about understanding TB, its causes, TB treatment, ways of transmitting TB, prevention methods, but also explaining risk factors for TB incidence.³¹

Knowledge about the prevention of transmission of pulmonary TB is the main provision to prevent transmission and spread of pulmonary TB disease. The higher level of knowledge contributes to shaping good attitudes and behavior.³² Good knowledge is very expected in preventing and overcoming pulmonary TB disease. Low levels of knowledge to prevent and cope with pulmonary TB disease can be a risk factor for the transmission of pulmonary TB.^{33,34} Less knowledge may occur because of the lack of information and inadequate information obtained and received by respondents.³⁵ The knowledge gap regarding the signs and symptoms of TB could affect the identification of the infection and delay the seeking of medical care and increase the risk of transmission to other members in the community.³⁶ Health education directed at bringing about significant changes in knowledge about TB must be improved in the pulmonary TB control program.^{16,17} Tuberculosis knowledge and awareness of medical treatment are important for the success of TB prevention and control.^{30,31}

The results of measurement towards respondents' attitudes on pulmonary TB in the research area, obtained results that respondents generally possess positive/ good attitudes. This favorable attitude towards TB is similarly reported by Hadi et al.²⁶ Good knowledge will result in a good attitude and it would assist in controlling pulmonary TB.¹⁸ From the results

of research conducted on 95 respondents in Turikale Subdistrict, Maros Regency obtained the conclusion that there is a significant relation of knowledge and attitudes with the prevention of pulmonary tuberculosis.²⁹ This is in line with the findings of research from Surakarta Community Health Center, whereas the results showed that there was a significant difference in attitudes after being given intervention. Increase of attitude score is related to knowledge improvement.^{27,28} One of the factors that influence in forming attitude is the knowledge possessed. The higher the level of knowledge possessed would contribute to forming a good attitude.^{37,38} Based on this study, it shows that there were still respondents who considered negative for pulmonary TB disease. Another reported similar findings with a significant proportion of the respondents being unwilling to relate with TB patients.³⁹ Similar findings were reported in Bangladesh, where the attitude and practices of the community indicated the existence of stigma attached to tuberculosis.^{40,41,42} Usually, the respondent's attitude will change after obtaining additional information through persuasive information. Showing that someone will give a good attitude towards efforts to control TB if the knowledge gained is also good and adequate.

The limitation of this study is that data collection was done only by using a questionnaire without accompanied by interviews with respondents. The questionnaire used in this study only contained closed questions; thus, the researcher did not get a complete answer. Therefore, for the next study, it is strongly recommended to use a mixed-method research design. Besides, the question through the questionnaire, respondents can provide direct answers according to their perceptions without restricted by the answers to the dichotomy yes or no question.

CONCLUSION

Useful knowledge is expected to prevent and cope with pulmonary TB disease. The higher the education then it will contribute to shaping good attitudes and behavior

DISCLOSURE

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