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KNOWLEDGE AND ATTITUDE ABOUT TUBERCULOSIS DISEASE IN THE COMMUNITY

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ABSTRACT

Tuberculosis (TB) cases in 2020 in East Nusa Tenggara Province were 5,126 with the highest TB cases being Kupang City, with 522 cases or prevalence rate = 118 per 100,000 population with a low cure rate. A person's behavior about TB can affect the incidence of TB and its treatment. This study aims to determine the knowledge and attitudes of the people in Kupang City about tuberculosis. This type of research is descriptive research with knowledge and attitude variables. The sample in this study were 100 respondents from the community in Kupang City. Data was collected using a questionnaire in a google form which was shared via Facebook, WhatsApp, and Instagram. The data collected were processed and analyzed descriptively to see the frequency distribution of the research variables. The knowledge of the community in Kupang City about tuberculosis is 90% including the Good category, 8% in the sufficient category and 2% in the less category. The attitude of the people in Kupang City in the treatment and prevention of tuberculosis transmission is mostly in the Good category (99%) and the remaining 1% is in the Less category. Although the knowledge and attitudes of the community are mostly good, there is still a need for counseling about knowledge, especially about the transmission method of TB which will have an impact on community actions in preventing TB and reducing the incidence of TB in the community.

Keywords: attitude; knowledge; prevention; treatment; tuberculosis

INTRODUCTION

TB disease is caused by Mycobacterium tuberculosis and is transmitted through droplets from patients with AFB TB (Kemenkes RI, 2020). The length of time TB germs survive in the free air can be one or two hours or more, this depends on the presence of sunlight and sanitary conditions in the surrounding environment. For this reason, it is necessary to keep the habit of covering the mouth and nose when sneezing or coughing to reduce the number of germs released from the lungs so as to reduce the risk of transmitting TB disease to those around them (Kemenkes RI, 2020). The risk of developing TB infection into TB disease occurs as the immune system decreases, for example in people with diabetes mellitus (DM), HIV, people with drinking and smoking habits, and malnutrition (Muchtar, Herman, & Yulistini, 2018).

Indonesia ranks 3rd in the world with the highest TB cases after India and China, which reached 845 thousand cases and 100 thousand deaths due to TB (WHO, 2020). TB cases in NTT Province in 2020 were 5,126 cases, this was a decrease compared to TB cases in 2019 which reached 7,585 cases. The city of Kupang occupies the highest TB case in NTT Province, namely 522 TB cases or a prevalence rate of 118 cases per 100,000 population, with the second position being Belu Regency. Kupang City's ranking has increased compared to the previous year which was only ranked second (Dinkes Provinsi NTT, 2020). Previous research found that the better

the level of knowledge of an object, the better the attitude towards that object will be (Djannah, Suryani, & Purwati, 2009). A person's knowledge and attitudes are influenced by several factors, including: experience, education, and facilities obtained. Education can cause someone to get more information than the uneducated, both from other people and the mass media. The more information that enters a person, the better the knowledge he gets.

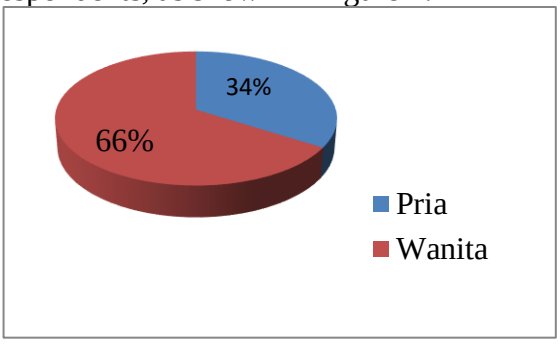
Good public knowledge about tuberculosis is considered very important because the public will get information about the causes, symptoms, modes of transmission and risk factors so as to make the risk of transmission smaller. Conversely, if the public's knowledge about tuberculosis is lacking, the risk of transmission is greater, for example, one family member in the house suffers from TB, due to lack of knowledge about TB disease, TB sufferers who are in the house throw phlegm carelessly, then do not use a mask so that the risk of transmission to other people in the house are getting bigger. Often a person's level of knowledge does not determine his attitude towards an object. Attitudes can be formed only because of imitating or imitating the attitudes of others, for example someone being positive in terms of preventing tuberculosis, not necessarily because of good knowledge but could be due to imitating the attitudes of their parents or those around them in preventing tuberculosis. People who have less attitude, but have efforts to prevent tuberculosis either due to the desire or fear of contracting tuberculosis but have less knowledge so that they do not know that what they do can cause tuberculosis transmission (Rahman et al., 2017). With the high number of TB cases in Kupang City, this research was conducted to see the knowledge and attitudes of the community about tuberculosis.

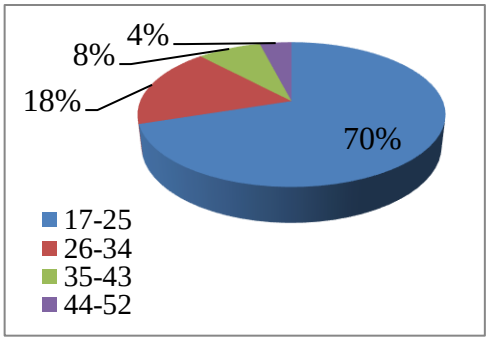
METHOD

This descriptive research was conducted to describe the events and events under study without any special treatment of these events or events (Noor, 2017). The variables studied were community knowledge about TB and community attitudes in the prevention and treatment of TB. The population is people in Kupang City aged 17-64 years 2020, totaling 303,461 residents (BPS Kota Kupang, 2020). The sample is people in Kupang City with inclusion criteria aged 17-64 years, willing to be respondents and willing to fill out questionnaires in google forms which are distributed through social media such as Facebook, WA and Instagram. The sample size was searched by the Slovin formula so that 100 people were obtained, then used accidental sampling technique to take the research sample (Sugiyono, 2012). Descriptive analysis is used to describe the characteristics of the respondents and the frequency distribution of the research variables.

RESULTS

The study was conducted on people in Kupang City as many as 100 respondents who live permanently in Kupang City, consisting of 66 women (66%) and 34 men (34%) of the total respondents, as shown in Figure 1.





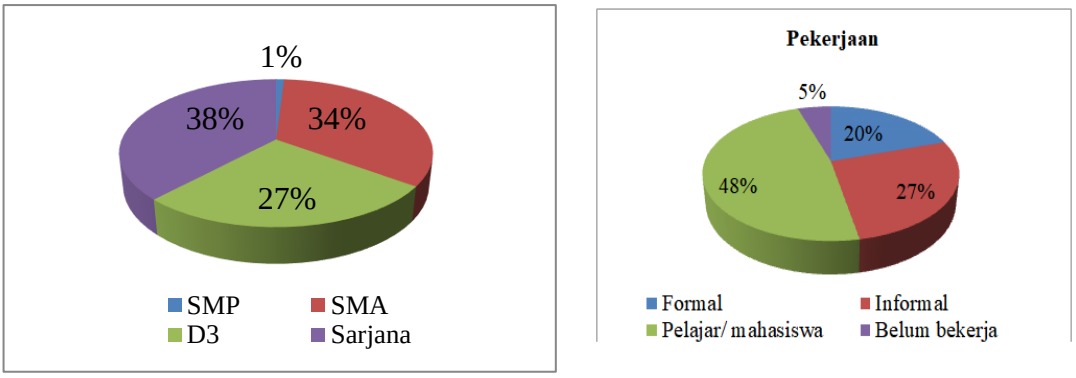


Figure 1. Gender, Age, Education and Occupation of Respondents in Kupang City

Figure 1 also shows that the largest age group is 17-25 years, which is 70 people (70%), while the 44-52 year age group is the least, which is only 4 people (4%). Figure 1 shows that based on the level of education, the highest number is tertiary institutions with 38 people (38%). Figure 2 also shows that most of the respondents' occupations are students, as many as 48 people (48%). This study also found that most of the knowledge about TB was good, namely 90%, while only 8% was sufficient and the rest was less (2%).

Table 1.
Distribution of Respondents Based on Knowledge about Tuberculosis in Kupang City`

Variable (n = 100)	Right (%)	Wrong(%)
The cause of TB disease Mycobacterium tuberculosis	98	2
Tuberculosis is an infectious disease	93	7
TB can be transmitted through the air	78	22
TB disease can be transmitted through droplets	87	13
TB germs are more easily transmitted in a closed room	92	8
The rate of transmission and the body's resistance affect the transmission of TB germs	95	5
The condition of home ventilation is a risk factor for the incidence of TB	90	10
Moist floors make it easier for TB to spread	90	10
Lighting does not facilitate TB transmission	90	10
TB is not a hereditary disease	90	10
Sunlight can minimize the transmission of TB germs	87	13
Ages 17-50 years are included in the group at risk of contracting TB	90	10
Poor nutritional status increases the risk of TB incidence	65	35
Prolonged contact with TB patients increases the risk of transmission	92	8

Table 1 shows that 98% of the people already know the cause of tuberculosis. While 22% of people do not know that tuberculosis can be transmitted through the air. As many as 35% of people do not know that poor nutritional status can determine the occurrence of TB. As many as 13% of people do not know that the saliva splashes of TB patients can transmit TB germs, and as many as 13% of people do not know that natural lighting (sunlight) can minimize the transmission of TB germs.

Table 2.
Knowledge Distribution Based on Characteristics of Respondents

Characteristics of Respondents		Knowledge			Total
		Good	Enough	less	
Sex	Male	31	2	1	34
	Female	61	4	1	66
Age (Year)	17-25	63	5	2	70
	26-34	17	1	0	18
	35-43	8	0	0	8
	44-52	4	0	0	4
Education	Junior/High School	33	2	0	35
	Diploma/ Bachelor	59	4	2	65

Table 2 shows that women have a level of knowledge that is not much different from men, while from the level of education, it turns out that the majority of those with junior/high school education are lacking knowledge.

Table 3.
Attitudes of Respondents in Prevention of Transmission and Treatment of TB

Variables	Agree (%)	Disagree(%)
Treatment		
TB treatment to prevent transmission	99	1
TB treatment to prevent recurrence	99	1
TB treatment to prevent death	99	1
TB treatment must be done 6-8 months	97	3
PMO needs to exist to ensure patient compliance	99	1
Prevention of Transmission		
Must cover mouth with tissue or handkerchief when coughing and sneezing	100	0
Tissue used for TB patients should not be thrown away carelessly	95	5
It is necessary to improve healthy housing to prevent TB transmission	93	7
BCG vaccine is mandatory for newborns	95	5
Washing hands must be with clean running water with soap	98	2
There is a need for education about TB in the community	99	1

Note: S = Agree; TS = Disagree

This study shows that 99% of respondents have a good attitude in preventing transmission and treatment of TB, and only 1% who have a poor attitude. In detail the attitudes of the respondents can be seen in Table 3. Table 3 also shows that 99% agree that TB treatment can prevent transmission, recurrence and death. It was still found that 7% did not agree that it was necessary to repair healthy homes for TB prevention, and 5% did not agree that used tissue from patients should not be disposed of carelessly and 5% did not agree that newborns should be given BCG.

DISCUSSION

Research in Kupang City shows that the age category of 17-25 years has good knowledge as many as 63 people. This shows that the community already has good and mature knowledge about the causes and symptoms, modes of transmission and risk factors for tuberculosis. Knowledge is the result of sensing an object. Knowledge is influenced by internal factors and external factors, where internal factors consist of: education, age, and gender, while external factors include socio-cultural and environmental (Adventus, Jaya, & Mahendra, 2019). As a person's age increases, his intellectual maturity will be more mature (Nursalam & Pariani, 2008). The older a person is, the better the process of understanding an information or knowledge, and the more mature he is in thinking or doing something.

Knowledge is also influenced by education, namely the higher the level of education, the better the knowledge. The level of education is not always a measure of a person's knowledge, it could be someone who has a low education but his understanding of TB knowledge is quite good. Like one of the respondents in the study who only had a junior high school education level but had good knowledge about the causes and symptoms, modes of transmission and risk factors for tuberculosis. This study in Kupang City also found that public knowledge was good because the average respondent had a tertiary education level, as many as 59 of the total respondents, while according to gender, there was not much difference in knowledge between women and men. Many people argue that knowledge is influenced by gender. This has happened since ancient times, but in modern times this opinion has been refuted because regardless of one's gender, if one is still productive, educated, or experienced, one will tend to have a good level of knowledge.

More than 95% of respondents already know the causes and symptoms of tuberculosis, but 35% of people do not know that poor nutritional status can affect the incidence of TB. As found in previous studies that there is a relationship between nutritional status and the incidence of pulmonary TB (Yusuf & Nurleli, 2018). Nutritional status is one of the factors that affect a person's health. A person who has a poor nutritional status will also have an impact on his low body resistance, and this is at risk for developing infectious diseases such as tuberculosis, and on the other hand, people suffering from diseases are also susceptible to malnutrition. Malnutrition or malnutrition can cause a decrease in the body's immunity thereby increasing susceptibility to infectious diseases including TB infection. To deal with the problem of lack of nutritional status, the thing to do is to increase immunity by consuming balanced nutrition, so that you can protect yourself from infectious diseases.

In the study it was also found that as many as 22% of people did not know that tuberculosis can be transmitted through the air. As many as 13% of the total community respondents do not know that the splash of saliva from TB patients can transmit TB germs. Tuberculosis has a close relationship with the environment, one of which is air. TB transmission can occur through the air (air borne disease), so that when someone is sick with tuberculosis it becomes a source of infection when talking, coughing, and sneezing does not cover his mouth so that it will release droplets containing TB germs into the air.

Transmission of TB disease occurs when an active TB patient coughs or sneezes then sprinkles mucus or phlegm along with TB germs, then TB germs will be carried into the air which will then enter the body of a healthy person through the air they breathe and then a transmission occurs (Kemenkes RI, 2020). So that people can avoid infectious diseases such as Tuberculosis, it is necessary to increase health knowledge by making efforts, namely in the form of health education messages to the community or groups in accordance with the intended target. For

example, TB patients are required to wear a mask so that there is no transmission through splashes of saliva, either when coughing or sneezing.

This study in Kupang City also found that as many as 13% of the public did not know that natural lighting (sunlight) could minimize the transmission of TB germs. According to Fatimah (2008), someone who lives in a house with lighting levels that do not meet the requirements will have a higher risk of being infected with tuberculosis than people who live in homes with lighting that already meets the requirements. Many types of bacteria can be killed if the bacteria get natural lighting (sunlight), so that if the lighting is good, the transmission and proliferation of TB germs can be prevented. Health knowledge about tuberculosis can also be increased by utilizing various media, for example via radio, television and other health articles about TB. The more people receive information, the better the knowledge that will be obtained.

Attitudes in the treatment and prevention of tuberculosis transmission in the community in Kupang City showed that most of them were good, namely 98 people (98%). Most people already understand and understand attitudes in the treatment and prevention of tuberculosis transmission. The higher the level of one's knowledge, the better knowledge and attitudes will be formed. Previous research also found that there was a relationship between attitude and the incidence of tuberculosis in Pekalongan City ($p = 0.009$) (Sari, 2018). However, other studies say that there is no significant relationship between attitude and the incidence of tuberculosis (Wenas, Kandou, & Rombot, 2015), For this reason, further research is also needed whether there is a relationship between knowledge and attitudes towards preventive measures and also to the incidence of TB.

As many as 7% of respondents in this study did not agree that the improvement of healthy housing can prevent tuberculosis. Actions to improve healthy housing conditions must remain a priority in the TB control program in the context of preventing the incidence and transmission of TB and to improve the quality of public health in general. Uninhabitable settlements are still often found in big cities and in rural areas where BPS data for 2019 shows the percentage of decent settlements in urban and rural areas, which is only 56% or as much as 44% is still unfit housing. This is because there are still many poor conditions of the physical environment of the house and supporting facilities, such as poor air circulation, unqualified floor conditions, and poor sanitation facilities. Air quality is not good and natural lighting (sunlight) is less usually caused by the absence of open spaces. This condition will cause the air in the house to not flow or enter and exit properly, as a result it will cause health problems for the occupants of the house (Hariyanto, 2007). Poor housing facilities will have an impact on public health, especially increasing the risk of air borne diseases such as tuberculosis and ARI. To prevent this, it is necessary to improve healthy housing, namely by repairing uninhabitable housing in accordance with the principles of healthy housing requirements.

In this study, it was found that 5% of people did not agree that used tissue from TB patients was not disposed of carelessly. The tissue used by the patient should not be thrown away in any place, especially in a humid place where there is no sun, TB bacteria live in damp places and have the potential to spread to other people (Chandra, 2011). The tissue used by the patient must be disposed of in a special place so that the TB bacteria cannot be transmitted to other people. This study also found that there were still 5% of respondents who did not agree with the obligation to give the BCG vaccine to newborns. As it is known that immunization aims to increase immunity from birth and protect or protect ourselves from infectious diseases. For this reason, it is mandatory to carry out the BCG vaccine in newborns in order to avoid TB disease. Newborn babies must be given the BCG vaccine both in Indonesia and in other countries

because it can reduce the risk of severity if infected by TB germs. This has also been proven in a study in Tunisia in a cohort study for 40 years, namely the BCG vaccine was proven effective in preventing the occurrence of pulmonary tuberculosis and also tuberculosis with other locations in the lungs, but the BCG vaccine was not effective in preventing tuberculosis in the lymph nodes (Bennasrallah et al., 2019).

This study also found 3% of people did not agree that TB treatment was mandatory for 6-8 months. Treatment of TB disease aims to cure the patient, prevent a death, then prevent recurrence, then break the chain of transmission of TB disease and prevent the occurrence of germ resistance to Anti Tuberculosis Drugs (Kemenkes RI, 2020). TB treatment consists of 2 stages, namely: the first stage of treatment (intensive) 2-3 months and the advanced stage (4-6 months). This intensive stage of treatment requires patients to get medication every day with direct supervision to prevent negligence in taking medication that can have an impact on drug resistance. The second stage or the advanced stage of TB treatment, patients will get fewer types of drugs with the rules of consumption no longer every day but 3 times a week. This advanced stage is needed to kill persistent or dormant germs (sleep) so as to prevent recurrence. For this reason, TB treatment must be carried out for 6-8 months until the patient is said to have recovered from tuberculosis or is BTA negative (Kemenkes RI, 2020).

The attitude of the respondents in this study shows how the public responds to agree or disagree in the treatment and prevention of tuberculosis transmission in Kupang City. Attitude is not yet an action or activity that will be carried out but is a prediction that will be carried out or an action will be taken, therefore knowledge plays an important role in a person's attitude and vice versa. Seeing that not all public attitudes about prevention and treatment are good, health promotion is still very much needed, especially regarding risk factors for TB incidence, prevention of transmission and treatment of TB. So it is hoped that with the better knowledge and attitudes of the community, the better the community's actions will be and it is hoped that it will have a direct impact on reducing the incidence of TB in the community.

CONCLUSSION

Public knowledge in Kupang City about the causes of Tuberculosis is in the good category, which is 90%, but there is still some knowledge that still needs to be improved, including poor nutritional status that can determine the incidence of TB, tuberculosis can be transmitted through the air containing splashes of patient's saliva. TB, and natural lighting (sunlight) can minimize the transmission of TB germs. The attitude of the people in Kupang City in the treatment and prevention of TB transmission is good, but there are still some attitudes that need to be improved through health promotion as well as through other formal and informal education, namely the need to improve healthy housing to prevent transmission, not to throw away used tissues for TB sufferers. carelessly, the obligation to give the BCG vaccine to newborns. Although the knowledge and attitudes of the community are mostly good, there is still a need for counseling about knowledge, especially about the transmission method of TB which will have an impact on community actions in preventing TB and reducing the incidence of TB in the community. Health promotion is also given so that TB patients are required to wear masks so that there is no transmission through splashes of saliva either when coughing or sneezing, then mandatory TB treatment for 6-8 months, and mandatory BCG vaccination for newborns.

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