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Knowledge Level Of Pulmonary Tuberculosis Patients About Effective Coughing at Poliklinik Paru RSAD TK. II Udayana

Winata Winata [1*],Krisnayani Krisnayani[2]
[1-2]STIKES Kesdam IX/Udayana, Denpasar, Indonesia

*Korespondensi Penulis: Iskandarprimadonai@gmail.com**

Abstract.*Background: In patients with pulmonary tuberculosis, in this case, an early symptom and often complained of is a persistent cough accompanied by a buildup of secretions in the lower respiratory tract. Accumulation of secretions in the lower respiratory tract can make the cough worse because the secretions clog the airways so that efforts are needed to remove the accumulated secretions by carrying out an effective cough. However, the reality is that many people with pulmonary tuberculosis cough in an inefficient and dangerous way. Coughing in this way will cause a persistent cough-stimulating reaction. Purpose: The purpose of this study was to describe the level of knowledge of pulmonary tuberculosis patients about effective coughing at the Poli Lung at Tk II Udayana Hospital. Research Methods: The approach method used a descriptive design. Sampling in this study using total sampling technique using 44 respondents. The method of data collection is by distributing questionnaire sheets. Data were analyzed by univariate analysis Results: The study was conducted on 44 respondents in the Lung Poly at Tk II Udayana Hospital regarding effective cough. It was found that the average respondents' knowledge was classified as good (72.7%). Based on the age of most respondents aged 26-35 as much (40.9%). Based on gender, most of the respondents were male (70.5%). Based on occupation, most of the respondents work in private (61.4%). Based on education, most of the respondents have high school education (70.5%). Conclusion: It is recommended to patients to broaden their insight and knowledge about effective coughing in pulmonary tuberculosis*

Keywords*: Effective cough, Pulmonary, Tuberculosis*

1. INTRODUCTION

Tuberculosis (TB) is still a global health problem, because this infectious disease caused by mycobacterium tuberculosis is considered the most dangerous in the world of health that attacks the lungs (1). Pressure in the lungs increases, so that it can cause injury to the fine lung structure, swollen throat and vocal cords, hoarse voice, itching and red face (2). In patients with pulmonary tuberculosis, in this case, the early symptoms and often complained about are continuous coughing accompanied by accumulation of secretions in the lower respiratory tract. The accumulation of secretions in the lower respiratory tract can make the cough even harder because the secretions block the respiratory tract so that efforts are needed to remove the accumulated secretions by doing effective coughing (3). Globally, there were 10.4 million cases of pulmonary tuberculosis in 2016 (8.8 million-12 million) which is equal to 120 cases of pulmonary tuberculosis per 100,000 people in the world. The results of the report based on the WHO Global Tuberculosis Report 2015, Indonesia is one of the 22 countries in the world with the highest cases of pulmonary tuberculosis with the total number of cases recorded in 2014 as many as 324,539 cases of pulmonary tuberculosis and the number of new cases reaching 322,806 (Sarmen & Suyanto, 2017). Pulmonary TB is included in the top ten diseases

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in inpatients and outpatients at RSU and RSUD throughout Bali province in 2017, namely 1,772 patients (4). In Bali Province in 2017, the highest new discovery of BTA (+) was in Denpasar City at 60.48 per 100,000 population and all TB cases were also in Denpasar City at 136.8 per 100,000 population (5). Case Notification Rate (CNR) and Success Rate (SR) are two indicators used to see the tendency of increasing TB cases in an area. CNR is considered good if there is an increase of at least 5% compared to the previous year. For 2019, the target assigned to the CDR indicator for TB cases, both those stated in the Renstra and Renja of the Bali Provincial Health Office, is 30%. In 2019, this CDR indicator has been achieved where the realization was 34.7%. The cure rate for all cases that must be achieved is at least 85% while the success rate for treatment of all cases is at least 90%. The success rate for treatment in Bali Province is still below 90%, which has only reached 89.6%. The achievement rate below 90% is caused by several things such as death during treatment, failed treatment, drug withdrawal, and untraceable transfer (6). Based on the results of a preliminary study by administering a questionnaire conducted at the Poliklinik Paru of RSAD TK II Udayana, it was found that out of 10 pulmonary TB patients, 5 patients (50%) had poor knowledge about effective coughing and the remaining 5 patients (50%) had good knowledge about effective coughing. Pulmonary tuberculosis (TB) is a disease transmitted through droplets (air) released by active pulmonary TB sufferers through coughing or sneezing and inhaled by others so that this disease is increasingly susceptible to becoming more widespread and will become an increasing case finding if not controlled (4). In patients with pulmonary tuberculosis, the secretions that are continuously released cause the cough to become deeper and very disturbing to the patient during the day or night, these secretions can be removed maximally through effective coughing, but in reality many patients with pulmonary tuberculosis cough in an inefficient and dangerous way (7). Coughing in this way will cause a continuous cough stimulus reaction. Effective coughing is one of the effective nursing efforts or actions to help remove phlegm that sticks to the airways and keep the lungs clean if done correctly (8). Deep breathing functions to open the airways that are experiencing adhesions and make sputum enter the large airways to be removed, deep breathing is done by inhaling air through the nose and exhaling through the mouth with the mouth forming the letter O (9). This good and correct effective cough will accelerate the removal of phlegm in patients with tuberculosis. Effective coughing is important to eliminate respiratory disorders due to accumulation of secretions so that the patient does not get tired in removing the secretions (10). Studies have also been conducted previously. In Nugroho's study (2011), in patients with ineffective airway clearance at the medical rehabilitation installation of Kediri Baptist Hospital,

2. METHODS

This were a descriptive study that aims to describe the level of knowledge of pulmonary TB patients about effective coughing at the Poliklinik Paru RS Tk. II Udayana. The study was conducted at the Poliklinik Paru RS Tk. II Udayana, Denpasar in February-March 2021. The sample in this study were 44 patient with pulmonary TB at Poliklinik Paru RS Tk. II Udayana.. Data were collected by online questionnaire filled out by respondents on a Google form, then analyzed univariately.

3. RESULTS

The characteristics of respondents in the study were described in Table 1 below:

Table 1. Characteristics of Respondents Knowledge of Pulmonary Tuberculosis Patients about Effective Coughing

Characteristics	Frequency (n)	Percent (%)
Age		
17-25	16	36,4
26-35	18	40,9
36-45	7	15,8
46-55	1	2,3
56-65	2	4,6
Sex		
Laki-laki	31	70,5
Perempuan	13	29,5
Occupation		
Tidak bekerja	8	18,2
Swasta	27	61,4
PNS	9	20,5
Wiraswasta	0	0
IRT	0	0
Education		
Tidak sekolah	0	0
SD	0	0
SMP	4	9,1
SMA	31	70,5
Perguruan tinggi	9	20,5
Knowledge Level		
Baik	32	72
Cukup	9	20
Kurang	3	6
Jumlah	**44**	**100,0**

Based on the age of the respondents, the most were 26-35 years old, 18 people (40.9%). Based on gender, the most respondents were male, 31 people (70.5%). The most respondents worked as private employees, 27 people (61.4%). Some respondents were high school graduates, 31 people (70.5%).

Most respondents had a good level of knowledge, namely 32 people (72.7%), sufficient level of knowledge, 9 people (20.5%) and insufficient knowledge, 3 people (6.8%). It can be concluded that the most respondents had a good level of knowledge, 32 people (72.7%).

4. DISCUSSION

This study showed that most respondents were aged 26-35 as many as 18 people (40.9%). Productive age is susceptible to suffering from Tuberculosis, someone tends to still do a lot of activities without taking precautions and not knowing someone's medical history. Productive age is the age where someone is at the stage of working or producing something either for themselves or others (Wardani, 2013).

This result is in accordance with research conducted by researchers which shows that the characteristics of respondents based on age are 26-35 years old are 18 people (40.9%), 17-25 years old are 16 people (36.4%), 36-45 years old are 7 people (15.8%), 56-65 years old are 2 people (4.6%) and 46-55 years old are 1 person (2.3%). Pulmonary Tuberculosis is a chronic disease that can attack all ages, mostly occurs in adulthood because it is associated with the level of activity, mobility and work as a productive workforce so that it is possible to easily contract mycobacterium tuberculosis from sufferers, positive BTA. In addition, the increasing habit of smoking at a young age in developing countries is also a factor in the high incidence of Pulmonary Tuberculosis in productive ages (Panjaitan, 2010)

This study shows that most respondents are male (70.5%). Men are more susceptible to Tuberculosis due to unhealthy lifestyle habits such as smoking, drinking coffee, alcohol and supplements that can trigger systemic which can reduce the function of the respiratory system and affect the respondents themselves (5). There are more male TB sufferers than females, this is related to the lifestyle and activities of men who are more active than women so that men can be more easily exposed to Mycobacterium Tuberculosis germs. Bacteria spread into the air in the form of phlegm droplets when the sufferer coughs or sneezes.

Bacteria spread through droplets can survive in the air at room temperature. Kurniawan's research (2012) found that most respondents were male (68.5%). The high number of cases of Pulmonary TB in men is due to the habit of smoking which is widely done by men, cigarettes smoked by someone containing toxins that can damage health so that they are easily infected with various diseases including Mycobacterium Tuberculosis. Based on work, it is known that most of the respondents are private employees (61.4%). According to Notoatmodjo (2010) work is something that is done to earn a living or livelihood for people who are busy with daily activities and have relatively little time to get information (11). Working as a private

means interacting a lot with the environment. This shows that the social interaction factor is closely related to the exchange of information, either from one's own experience or from print media, or from health service places. In research, it is not always determined by work background alone, but also from educational background. Other respondents, who come from a college environment (while studying), are also more knowledgeable. According to the researcher's assumption, it is not in accordance with the theory (9) that these highly educated respondents, first, have the awareness to recover and be healthy again, second, they are exposed to the flow of information, so it is easy and fast to get more information through health information media, print media and social media. One of the social structure factors, namely work, will influence the use of health services. A person's work can reflect the amount of information received. This information will help a person in making decisions to use existing health services.

Most respondents (70.5%) were high school graduates. This is in accordance with the theory put forward by Kuncoroningrat (2007) which states that the higher a person's education level, the easier it is to receive information so that the more knowledge they have. Conversely, less education will hinder the development of a person's attitude towards newly introduced values. Their thinking patterns are different from those with higher education who will find it easier to support their health and be able to make decisions quickly in solving a health problem (Butarbutar, et al. 2012). A person's educational status is an important factor in determining a person's health status. The higher the level of education, the higher the awareness of the importance of health

Patients' knowledge about effective coughing at the Poliklninik Paru RSAD Tk. II Udayana, seen from the respondents' answers to the Pulmonary TB patient knowledge questionnaire about effective coughing, showed that the level of knowledge of Pulmonary TB patients about effective coughing at the Poliklinik Paru of RSAD Tk II Udayana, obtained from 44 respondents showed that almost most respondents had good knowledge about effective coughing, namely 32 people (72.7%), respondents who had sufficient knowledge were 9 respondents (20.5%), and knowledge was lacking, namely 3 respondents (6.8%).

The results of this study are in accordance with the study of I Gusti Ketut and Putu Ayu Gede in 2013 Knowledge of Tuberculosis Patients in Carrying Out the Anti-Tuberculosis Drug Treatment Program (OAT) which stated that the results showed that almost most respondents, namely 74%, had a high level of knowledge of tuberculosis patients regarding coughing etiquette, where tuberculosis patient knowledge regarding coughing etiquette is the ability or competence of individuals to be able to prevent the spread of disease.

The knowledge of tuberculosis patients about effective coughing etiquette must be further increased to prevent the increase in cases of pulmonary TB every year due to lack of knowledge about coughing etiquette, perceptions about the importance of prevention and minimizing transmission. The more someone experiences a lack of knowledge in themselves, the knowledge of tuberculosis patients about coughing etiquette will decrease, therefore it is necessary to provide information so that respondents can prevent the occurrence of tuberculosis patient knowledge about effective coughing etiquette. A person's knowledge is influenced by several factors, namely level of education, experience, environment, social, cultural and economic, and sources of information (11). In adulthood, a person is able to receive or remember knowledge. Age also affects a person's ability to understand and think. The older they get, the more their ability to understand and think will develop, so that the knowledge they gain will improve. A person's knowledge is also influenced by their level of education. According to Notoatmodjo, education is an effort to develop personality and abilities inside and outside of school and lasts a lifetime (11). Education affects the learning process, the higher a person's education, the easier it is for that person to receive information. With higher education, a person will tend to get information, both from other people and from the mass media. The more information that comes in, the more knowledge is obtained about health.

According to Lestari's theory (2015), one of the factors that influences knowledge is information. Information influences a person regarding the influence he has. Information can be obtained through mass media, the internet, or books. Discussions or sharing between friends, family, or coworkers can also be used to increase information and insight.

This result is in line with research conducted by Kurniawan (2012) in the Inpatient Room of Dr. M. Goenawan Partowidirgo Lung Hospital which stated that the description of the knowledge of TB patients about effective coughing obtained the description of the knowledge of the respondents most was a good level of knowledge (51.6%) and poor knowledge 48.4%

5. CONCLUSION

Most respondents (40.9%) were aged 26-35 years, 70.5% were male, 61.4% were private workers, and 70.5% were high school graduates. The level of knowledge of most respondents (72.7%) was in the good category.

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