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**RESEARCH ARTICLE**Article URL: <https://ojs.poltekkes-malang.ac.id/index.php/HAJ/index>

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**Education On Prevention Of Pulmonary Tuberculosis Transmission Using TikTok Media**

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**ABSTRACT**

The incidence of pulmonary tuberculosis (pulmonary TB) continues to increase every year, one of the contributing factors is the lack of public knowledge about pulmonary tuberculosis so there are still many people who are not healthy. The purpose of this study was to describe family knowledge about preventing pulmonary tuberculosis transmission using TikTok media at the Sukorejo Health Center. This research uses a descriptive method. The population in this study were all families accompanying pulmonary tuberculosis patients who were still registered and actively seeking treatment at the Sukorejo Health Center from January to April 2023, totaling 20 people. A sample size of 20 accompanying families of pulmonary tuberculosis patients was taken using a total sampling technique. Data collection used an instrument in the form of a questionnaire. The results of the study were: family knowledge about preventing the transmission of pulmonary tuberculosis using TikTok media as much as 80% in the good category, 20% in the enough category. Not all families can understand the prevention of pulmonary tuberculosis transmission using TikTok media, so a holistic approach is needed. Various parties need to work together to increase family understanding about preventing the transmission of pulmonary tuberculosis.

Keywords : Education; Prevention; Transmission; Pulmonary tuberculosis; TikTok

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**INTRODUCTION**

Pulmonary tuberculosis is a contagious infectious disease and every year the incidence is increasing (1). Observations from researchers show that some people's habits when interacting in public places or crowds, many still don't use masks and when coughing and sneezing don't apply proper cough etiquette. The cause of the increasing number of pulmonary tuberculosis patients in Indonesia is due to the lack of public knowledge about pulmonary tuberculosis so many people still behave in unhealthy

ways. In addition, family knowledge greatly influences the health status of the family and the pulmonary tuberculosis patient himself (1).

Based on data from the World Health Organization (WHO) in 2019, Indonesia is ranked third (8%) after India and China as a country contributing to the number of pulmonary tuberculosis in the world. Every year there are an estimated 1,020,000 cases of pulmonary tuberculosis in Indonesia, but only around 446,732 cases of pulmonary tuberculosis are reported and 2.5% die.

Based on data from the Republic of Indonesia Ministry of Health in 2020, pulmonary tuberculosis is among the top 10 highest causes of death in the world, one of which is in Indonesia, with as many as 843,000 cases of pulmonary tuberculosis. In 2022, the number of cases of pulmonary tuberculosis in Indonesia will increase by 2,000 from the previous year, bringing the number of cases of pulmonary tuberculosis to 845,000 (1).

Measures to prevent the transmission of pulmonary tuberculosis can be carried out by eliminating the source of transmission by seeking and providing treatment to patients with pulmonary tuberculosis, applying proper cough etiquette, not spitting or throwing phlegm anywhere, keeping the house and environment clean (2).

The pulmonary tuberculosis prevention program created by the Indonesian Ministry of Health in the promotive field is by means of health counseling or education. Education is an individual or group learning process that aims to improve the mindset, and knowledge, and develop the potential of each individual. Education is carried out by conveying important messages about pulmonary tuberculosis directly or using media such as leaflets and video media, or TikTok (2). Bahiyah and Wang (2020) state that, TikTok is a social media platform created in 2014 by Bytedance, a business based in Beijing, China that displays various types of video material with a range of 15 seconds to 3 minutes (3).

The educational guideline currently being promoted by the World Health Organization (WHO) is the treatment of pulmonary tuberculosis by emphasizing digital health education as a more effective and innovative tool when compared to other methods (4).

Based on data obtained from the Pulmonary TB Polyclinic at the Sukorejo Health Center on November 4, 2022, there were 30 patients with pulmonary tuberculosis and all patients had medication companions (PMO), pulmonary TB cadres at the Sukorejo Health Center totaled 9 people, then the results of interviews with five pulmonary TB patients The results showed that 2 pulmonary TB sufferers said they did not wear masks when leaving the house and only wore masks at the time of examination. At the time the researchers made observations, there were still 3 pulmonary TB sufferers who showed wrong cough ethics.

Based on the phenomenon above, the researcher is interested in conducting research on "Education on Prevention of Pulmonary Tuberculosis Transmission Using TikTok Media at the

Sukorejo Health Center." This study aims to describe family knowledge about preventing pulmonary tuberculosis transmission using TikTok media at the Sukorejo Health Center.

## METHODS

In this study using a descriptive research design with the definition according to Anggraini , 2022 descriptive design is a method that aims to describe or describe a condition or event that is found in society and direct data collection on the families of pulmonary tuberculosis patients.

The research was carried out at the Sukorejo Health Center on January 31 - April 6 2023. The population in this study were all families accompanying pulmonary tuberculosis patients who were still registered and actively seeking treatment at the Sukorejo Health Center from January to April 2023, totaling 20 people. Sampling using the total sampling technique is done by taking the entire population as a research sample. The number of samples in this study was 20 people. Data collection in this study used an instrument in the form of a questionnaire containing 10 questions about preventing the transmission of pulmonary tuberculosis. Processing and analysis of data in this study include tabulation and grouping of variables obtained from the results of questionnaires filled out by respondents. Each respondent's correct answer will be worth 1 (one), while the wrong answer will be worth 0 (zero).

## RESULT

Description of research results, researchers will display the results of the questionnaire.

### General Data

1. Characteristics of families accompanying pulmonary tuberculosis patients based on age

Table 1. Age of respondents at the Sukorejo Health Center  
January-April 2023 (n=20)

Age	Frequency	Percentage
26-35	2	10%
36-45	9	45%
46-55	5	25%
56-65	4	20%
Total	20	100%

Based on table 1 it is known that most of the respondents are aged 36-45 years. This age is included in the category of late adulthood.

2. Characteristics of families accompanying pulmonary tuberculosis patients based on gender

Table 2 Gender of respondents at the Sukorejo Health Center  
January-April 2023 (n=20)

Gender	Frequency	Percentage
Man	4	20%
Woman	16	80%
Total	20	100%

Based on table 2 it is known that the majority of respondents are female.

3. Characteristics of families accompanying pulmonary tuberculosis patients based on education

Table 3. Respondents education at the Sukorejo Health Center  
January-April 2023 (n=20)

Last Education	Frequency	Percentage
Elementary School	4	20%
Junior High School	4	20%
Senior High School/Vocational School	9	45%
University	3	15%
Total	20	100%

Based on table 3. it is known that most of the respondents had high school education.

4. Characteristics of families accompanying pulmonary tuberculosis patients based on work

Table 4. Occupation of respondents at the Sukorejo Health Center  
January-April 2023 (n=20)

Occupation	Frequency	Percentage
State Civil Apparatus	1	5%
Self-employed	11	55%
Private sector employee	1	5%
Housewife	7	35%
Total	20	100%

It is known that most of the respondents' jobs are self-employed.

Specific Data

Family Knowledge

Table 5. Family knowledge about the prevention of pulmonary tuberculosis transmission  
using TikTok media at the Sukorejo Health Center  
January-April 2023

Knowledge Category	Frequency	Percentage
Good	16	80%
Enough	4	20%
Deficient	0	0%
Total	20	100%

Based on Table 5. it is known that 80% (16 people) of family knowledge about preventing transmission of pulmonary tuberculosis using TikTok media at the Sukorejo Health Center obtained good knowledge.

Table 6. Results of family knowledge about preventing transmission of pulmonary tuberculosis using Tiktok media based on instrument parameters at the Sukorejo Health Center January-April 2023

Statement	Frequency	Percentage
Definition of pulmonary tuberculosis	20	100%
Cause of pulmonary tuberculosis	20	100%
Signs and symptoms of pulmonary tuberculosis	20	100%
Prevention of transmission of pulmonary tuberculosis by applying 5 good and correct cough etiquette	20	100%
Prevention of transmission of pulmonary tuberculosis when patients with pulmonary tuberculosis cough and sneeze covering their nose and mouth by using their hands	12	60%
Prevention of transmission of pulmonary tuberculosis by spitting/throwing phlegm anywhere	17	85%
Throwing phlegm directly in the bathroom is a prevention of transmission of pulmonary tuberculosis	13	65%
Coughing by covering the nose and mouth using the inside of the upper arm is an example of proper cough etiquette	20	100%
Families with pulmonary tuberculosis do not have a risk of contracting pulmonary tuberculosis	13	65%
Wearing a mask is one way to prevent the transmission of pulmonary tuberculosis	20	100%

Based on Table 4.6, data was obtained that respondents who answered correctly 100% were on the results of knowledge about the meaning of pulmonary tuberculosis, causes of pulmonary tuberculosis, signs and symptoms of pulmonary tuberculosis, prevention of transmission of pulmonary tuberculosis by applying 5 good and correct cough ethics, application of good cough ethics good and right by covering the nose and mouth using the inside of the upper arm, as well as how to prevent transmission of pulmonary tuberculosis by wearing a mask. The results of good family knowledge must be maintained, because family knowledge about preventing transmission of pulmonary tuberculosis, one of which is by understanding the application of 5 good and correct cough ethics, is very important to prevent transmission of pulmonary tuberculosis, especially to yourself, family members at home, and other people in the environment. Good family knowledge about prevention of transmission of pulmonary tuberculosis can also minimize the risk of developing pulmonary tuberculosis so that it can encourage a culture of healthy living to improve the quality of life and welfare for family members.

There were 3 items resulting from family knowledge that were less than 76%, namely how to prevent transmission of pulmonary tuberculosis when coughing and sneezing covering the nose and mouth using hands, disposing of sputum directly in the bathroom, and family understanding of the risk of transmission of pulmonary tuberculosis. Family knowledge in the "sufficient" category needs to be increased, namely in the first item regarding the prevention of transmission of pulmonary tuberculosis

when coughing and sneezing it is not correct to cover the nose and mouth with your hands, what is correct is to use the inside of your upper arm because germs and viruses stick to them. hands will easily spread to other people or objects that are touched and can increase the risk of transmission of pulmonary tuberculosis.

Then on the second item, some people think that the family's understanding of preventing the transmission of pulmonary tuberculosis by disposing of phlegm directly in the bathroom is not true even though the statement is true. However, most of the respondents already understood that throwing phlegm anywhere is not an action to prevent transmission of pulmonary tuberculosis. In the third item, there is still a lack of family understanding of the risk of transmission of pulmonary tuberculosis. There are respondents who think that family members are not at risk of contracting pulmonary tuberculosis. This answer is not true, because family members with pulmonary tuberculosis are at high risk of contracting pulmonary tuberculosis. The results of this sufficient family knowledge are influenced by the factor of final elderly age, therefore families are advised to remember and focus more on paying attention to the health information that has been given.

## DISCUSSION

Based on the results of research conducted on 20 respondents, it was found that 80% (16 people) had good knowledge about preventing the transmission of pulmonary tuberculosis using TikTok media, and 20% (4 people) had sufficient knowledge. Based on these results, family knowledge about preventing pulmonary tuberculosis transmission using TikTok media at the Sukorejo Health Center is in the "good" category.

Questionnaire data of respondents who have "good" knowledge, namely as many as 16 people already understand the prevention of pulmonary tuberculosis transmission. This is influenced by the effective and informative use of TikTok media so that families can easily receive information and knowledge about preventing the transmission of pulmonary tuberculosis. The use of Tiktok media displays videos in a unique and interesting way to convey health information, especially about preventing the transmission of pulmonary tuberculosis. This is supported by Leonita and Jalinus (2018), saying that the use of video media is very effective in conducting health education aimed at increasing public understanding and support for healthy behavior (5). In line with Maemunah et.al, 2021 stated that the provision of education using animated audiovisual media by combining images, animation, text, and video is more effective and able to increase understanding and attract someone who sees it. Information obtained through the eyes and ears provides a good stimulus for respondents so as to produce optimal information.

The researcher believes that families who often watch TikTok videos will more easily receive health information or health messages, especially about preventing the transmission of pulmonary

tuberculosis because the content of the information provided using TikTok media can be more easily understood and understood and retained in the respondents memories.

This is supported by table 4.3, namely the majority of respondents with the last education from SMA/SMK (45%). The educational background of the respondents is quite high education so with this education they will be more proficient in operating gadgets and even viewing videos from the TikTok application, and it will also be easier to receive and understand the health information obtained, especially regarding the prevention of pulmonary tuberculosis transmission using TikTok media. The higher a person's education, the easier it is to accommodate information clearly and the more knowledge he has, conversely if someone has a low level of education, it will be more difficult to accommodate the information that has been obtained (7).

Questionnaire data of respondents who know the "enough" category, namely as many as 4 people. The age of the 4 respondents who had sufficient knowledge was in the range of 56-65 years. This age is included in the category of late elderly. The results of the knowledge of 4 respondents in the moderate category are influenced by old age factors (late elderly). This is appropriate Anggraini, 2022 which states that there are several factors that can influence knowledge including internal factors, namely work, education, and age. While external factors are culture and environment. At the age of 56-65 is the final elderly age range where in this age group the ability to think, learn, and remember the information obtained decreases. The final elderly age factor is able to influence knowledge of respondents (8).

The researcher believes that families with an age range of 56-65 years are included in the late elderly category having difficulties in operating gadgets making it difficult to understand and remember health information or health messages conveyed by researchers about preventing pulmonary tuberculosis transmission using TikTok media. Efforts to increase family knowledge in the "adequate" category are by means of health workers providing health education using media that is more informative, innovative, and interesting according to the times, and families are advised to pay more attention and listen when obtaining health information, especially regarding prevention of transmission. Pulmonary tuberculosis (pulmonary TB).

Based on the results of the study, the researcher believes that family knowledge about preventing transmission of pulmonary tuberculosis using TikTok media at the Sukorejo Health Center is in the "good" category and can already know in general about preventing transmission of pulmonary tuberculosis.

## CONCLUSION

Based on the results and discussion of educational research on the prevention of pulmonary tuberculosis transmission using TikTok media at the Sukorejo Health Center, it can be concluded that family knowledge about preventing pulmonary tuberculosis transmission using TikTok media is in the

"good" category as much as 80% and in the "sufficient" category as much as 20%. Factors that influence family knowledge include the effective use of TikTok media, high educational background, and the factor of late elderly age. Suggestion

For the Health Center especially Pulmonary TB Polyclinic officers, they can provide health education to families of pulmonary Tuberculosis patients by using more varied, innovative, and interesting media according to the times, as well as using better educational delivery strategies. For the D-3 Nursing Study Program Blitar Poltekkes Malang. Schedule to conduct community service regarding learning in the field of family nursing by making home visits to families of pulmonary tuberculosis patients. Future researchers, they can develop research results by digging deeper into information delivery strategies to families by involving health workers and evaluating family behavior after being given education

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