



## THE ROLE OF FAMILY IN THE CARE OF PULMONARY TB PATIENTS

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### ABSTRACT

Tuberculosis (TB) remains one of the leading causes of death worldwide, including in East Sumba Regency. The management of pulmonary TB requires active involvement of the patient's family in the care, particularly at Kambaniru Health Center. This research aims to identify the role of the family in the care of pulmonary TB patients at Kambaniru Health Center. The research method utilized a quantitative approach with a phenomenological approach to understand the family's role. Participants were selected through purposive sampling, and the research was conducted in July 2021. Data were analyzed through transcription, categorization, verification of interpretation, and description. The results of the research indicate that the family plays a crucial role in the care of pulmonary TB, including reducing coughing, preventing transmission, modifying the environment, accompanying patients for regular check-ups, reminding patients to take medication, and providing motivation. The family's role includes reducing coughing, preventing transmission, modifying the environment, accompanying patients for regular check-ups, reminding patients to take medication regularly, and motivating patients to adhere to medication schedules.

Keywords: care of pulmonary; the role of family; tuberculosis

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## INTRODUCTION

Tuberculosis is a disease that can affect various parts of the body, such as the brain, kidneys, and spine. The most common target of TB is the lungs. TB bacteria damage the lungs (Wouk Hendry, 2010). The primary infectious agent of this disease is *Mycobacterium tuberculosis*. Pulmonary TB is transmitted from person to person through airborne transmission (Smeltzer, Suzanne C. dan Bare, 2002). Tuberculosis is a disease that can affect various parts of the body, such as the brain, kidneys, and spine. The most common target of TB is the lungs. TB bacteria damage the lungs (Hendry, 2010). The primary infectious agent of this disease is *Mycobacterium tuberculosis*. Pulmonary TB is transmitted from person to person through airborne transmission (Smeltzer & Bare, 2002). TB remains one of the top 10 causes of death and the leading cause of death among infectious diseases. Globally, in 2018, there were an estimated 10.0 million cases of pulmonary TB, with approximately 1.2 million deaths attributed to the disease. Pulmonary TB is most commonly suffered by males, around 57%. Geographically, the majority of TB cases in 2018 were in Southeast Asia (44%), Africa (24%), and the Western Pacific (18%), with the lowest percentages in the Eastern Mediterranean (8%), America (3%), and Europe (3%). The top eight countries contributing the most to TB cases were India (27%), China (9%), Indonesia (8%), the Philippines (6%),

Pakistan (6%), Nigeria (4%), Bangladesh (4%), and South Africa (3%) (World Health Organization, 2019).

In 2018, Indonesia's population numbered 265,015,313, with 511,873 cases of all types of TB reported, and 203,348 confirmed new cases of pulmonary TB (Hardhana et al., 2018). According to data from the East Sumba Health Office, there were 459 cases of pulmonary TB in 2016, 556 cases in 2017, 408 cases in 2018, and 398 cases in 2019. The number of pulmonary TB patients at Kambaniru Health Center was 68 in 2016, 68 in 2017, 58 in 2018, and 38 in 2019 (Dinkes Sumba Timur, 2016, 2017, 2018, 2019). According to the TB manager at Kambaniru Health Center, in 2019, there was one patient referred from Umbu Meha Regional Hospital who discontinued treatment and consumed herbal medicine. This indicates that there are patients who discontinue treatment at Kambaniru Health Center, East Sumba Regency. Discontinuation of treatment leads to non-recovery. When someone is diagnosed with pulmonary TB, they must undergo regular treatment for a minimum of 6 months. Irregular medication intake can result in non-recovery, the emergence of drug-resistant bacteria, transmission sources, and expensive treatment (Dinkes Sumba Timur, 2016, 2017, 2018, 2019) (Kemenkes.RI, 2018).

One of the challenges in TB treatment in the past decade is the emergence of multidrug resistance, caused by several factors, including poor regimen compliance. Client compliance in TB treatment is a key factor in TB treatment. Compliance with medication intake can increase the completion rate of the treatment process and prevent drug resistance (Makhfudli, 2019). Research conducted by the Research and Development Agency of the Indonesian Ministry of Health, cited by Fadila Nur Rizka (2014), mentioned that one of the factors contributing to the low cure rate is non-compliance with pulmonary TB treatment (Fadila & Riono, 2014). According to Nugroho Adhi Randy (2011), the factors underlying dropout are prolonged treatment through the intensive phase, disappearance of symptoms, patients feeling healed, non-gratuitous medication provision, patients not knowing about treatment stages, lack of Drug Swallowing Supervisor, transportation difficulties to the BP4, drug side effects, and ignorance of disease (Nugroho Adhi Randy, 2011).

To increase the cure rate of patients, the family's role in providing care during treatment is necessary. Research conducted by Kristinawati et al. (2019) mentioned that families provide physical and psychological care to support the successful treatment of pulmonary tuberculosis (Kristinawati et al., 2020). In a study by Jufrizal, Hermansyah, and Mulyadi (2016), it was stated that the family's role as a Drug Swallowing Supervisor is crucial for the success of pulmonary TB treatment (Jufrizal, Hermansyah, 2016). In another study by Puspita Dhang Dary et al. (2018), it was mentioned that the family's role is very important for children with pulmonary TB in the Treatment Process, Drug Swallowing Supervision (DSS), and daily (Dary et al., 2018). Families also play a role in providing motivation during pulmonary TB treatment. According to Dary et al. (2018), family motivation can provide support for complete treatment and also influence patient compliance with medication consumption. The management of pulmonary TB requires support and involvement from the family to achieve treatment success (Dary et al., 2018).

To improve the recovery of pulmonary TB patients, the family's role in providing care for pulmonary TB patients is essential. Roles that can be provided by families include being Drug Swallowing Supervisors (DSS) and providing motivation to pulmonary TB patients during treatment. Based on the above description, the author wants to conduct further research on the Role of Family in Providing Care for Pulmonary TB Patients at Kambaniru Health Center.

## METHOD

This study is a qualitative study using a phenomenological approach to identify the role of families in the care of pulmonary TB patients. The research was conducted in the working area of Kambaniru Health Center, East Sumba Regency, from May to July 2021. The participants in this study were families of pulmonary TB patients at Kambaniru Health Center. Sampling in this research used a purposive strategy. Participants selected for this study were determined based on inclusion criteria, including: families with pulmonary TB patients registered at Kambaniru Health Center, families with members undergoing treatment, families of patients aged 15-60 years, families of TB patients without mental disorders, families of patients who can read and write, and families willing to be studied. Exclusion criteria included families with hearing impairments, families not living with pulmonary TB patients, and families unwilling to be studied. In this study, data collection was conducted using in-depth interviews to obtain complete and in-depth information related to the role of families in the care of pulmonary TB patients at Kambaniru Health Center, East Sumba Regency. To address deviations in collecting, gathering, processing, and analyzing research data, the researcher conducted data triangulation from various sources. The collected data were re-examined together with the participants. This step allowed a review of the accuracy of the collected information. Additionally, data cross-checks were conducted with other sources considered knowledgeable about the research issue.

## RESULTS

### Characteristics of Participants

As shown in table 1 The participants of this study were 5 patient's family; 3 women and 2 man, aged 51-60 years as many as 3 participants, 3 Senior High School and 2 Elementary School, 1 Farmer, 3 Mother House Ladder and 1 Retired

Table 1.  
Characteristics of Participants

Gender	f	%
Man	2	40
Woman	3	60
age		
20-30 years	1	20
31-40 years	0	0
41-50 years	0	0
51-60 years old	3	60
> 60 years	1	10
Education		
Elementary School	2	40
Junior High School	0	90
Senior High School	3	60
Type Work		
Farmer	1	20
Mother House Ladder	3	60
Retired	1	20
Total	5	

Based on the analysis above, there are 6 themes, namely: Care for patients with coughing, Efforts to stop the transmission of pulmonary TB disease, Environmental modifications, Placement of medicines in easily visible and accessible places, Regular check-ups at health centers and Reminding patients to take medication and the motivation provided by family members And the motivation provided by family. This theme will be explained as follows:

#### Theme 1: Care for pulmonary TB patients experiencing coughing.

The care for pulmonary TB patients experiencing coughing involves actions to reduce coughing. From the interview results with the participants, it was found that the efforts made by TB patients include providing hot or warm water, while others directly purchase medicine. As expressed by the participants in the following statement:

*"I give warm water so the coughing reduces..."* P2 *"I give hot water so the coughing reduces..."* P5 *"If coughing, immediately buy medicine..."* P1, P3, P4

#### Theme 2: Efforts to break the transmission of pulmonary TB disease..

The results of the interviews with the participants mentioned that efforts to prevent transmission to other family members include wearing masks, disposing of phlegm in tissue then putting it in a tied plastic bag, separating eating utensils, and sleeping separately from other family members. The interview results are as follows:

*"...still wear a mask..."* P1 *"...separate eating utensils..."* P1, P2, P3, P4 *"...so as not to spread, limit oneself..."* P4 *"...dispose of phlegm in tissue and put it in a plastic bag then tie it..."* P1 *"...dispose of phlegm in the plastic bag provided by the health center..."* P2 *"...dispose of it in plastic..."* P3 *"...sleep separately...wash and clean by myself..."* P1 *"...sleep separately..."* P2, P3, P4, P5

#### Theme 3: Environmental modifications.

Based on the interviews with the participants, it was found that the windows and doors of the room are opened every day. The interview results with the participants are as follows:

*"...often open the door and window..."* P1  
*"...open the window every day..."* P2, P3  
*"...doors and windows are opened every day..."* P4, P5

#### Theme 4: The role of family in regular check-ups and medication consumption..

Based on the interviews with the participants, it was found that the family plays a role in accompanying the patient for regular check-ups at the health center, collecting pulmonary TB medicine, and reminding the patient to take medication regularly. Statements from the participants are as follows :

*"...My father hasn't been going anymore. Because he can't ride a motorcycle, afraid of falling. So, I go to pick up the medicine..."* - P1.  
*"...I accompany..."* - P2  
*"...I accompany sometimes my sister-in-law..."* - P3.  
*"I have been the one accompanying to the health center for check-ups and to pick up the medicine..."* - P4  
*"...Until now, I have been the one accompanying to pick up the medicine at Kambaniru health center..."* - P5

#### Theme 5: Reminding patients to take medication regularly.

Based on the interviews with the participants, it was found that the family of pulmonary TB patients reminds them to take their medication regularly to facilitate quick recovery. Statements from the participants are as follows:

*"...It's just me who reminds..."* - P1  
*"...Father and other family members..."* - P2  
*"...I myself remind them to take the medication regularly for a quick recovery"* - P3 *"...I myself remind them..."* - P4 *"...I remind them..."* - P5

#### Theme 6: Motivation provided by the family.

Based on the interviews with the participants, it was found that the family provides motivation for regular medication intake, adherence to prescribed guidelines, avoiding smoking, and abstaining from alcohol consumption. Statements from the participants are as follows:

*"If you want to recover, you must adhere to taking medication and follow the given rules..."* - P1

*"Regularly taking medication... don't smoke, don't drink alcohol..."* - P2

*"Regularly taking medication... don't smoke..."* - P3

*"Regularly taking medication... I've been taking medication for 4 months, previously I took red-colored medication, now I take medication every Monday, Wednesday, and Friday..."* -P4

## **DISCUSSION**

### **The family's role in providing care when pulmonary TB patients are coughing**

Based on the interviews, it was found that the family's role in caring for pulmonary TB patients who are coughing includes providing warm water to the patients. Warm water can help thin mucus, thus keeping the patient's airway clear. . This finding is supported by a study conducted by Adi Putra Sudarma Made I, and Rahayu Novita Mahendra Kadek (2017), which states that providing warm water has a hydrostatic and hydrodynamic effect, ensuring the patient's airway remains patent(Adiputra & Rahayu, 2017). In another study conducted by Fadli Firman et al. (2022), it was mentioned that drinking warm water is beneficial in helping to address respiratory tract cleanliness issues(Firman Fadli, Yuyun Sarinengsih, 2022).

### **The family plays a crucial role in efforts to prevent the transmission of pulmonary TB disease.**

Based on the interviews with participants, it was found that the family's role in efforts to prevent the transmission of pulmonary TB disease to other family members includes using masks, disposing of phlegm on tissues and collecting them in plastic bags before tying them, separating eating utensils, and sleeping separately from the patient. This research finding is supported by a study conducted by M Lailatul Nur, S, Rohmah, and Wicaksana Yoga Azar (2015), which indicates that efforts to break the chain of transmission of pulmonary TB disease include disposing of phlegm in closed containers and consistently wearing masks.(Lailatul et al., 2015).

### **The family's role in modifying the environment.**

Based on the interviews with participants, it was found that one of the preventive measures for avoiding the transmission of pulmonary TB is modifying the environment by opening doors and windows every day. Opening doors and windows daily facilitates air circulation and allows sunlight to enter the room, which helps to kill pulmonary TB bacteria. This finding is supported by Anis (2006) as cited in Nuraini F. Anggi (2015), which states that the habit of opening windows every day is one of the preventive measures against airborne pathogens such as TB bacteria. Open windows during the day serve as a means for sunlight to enter and for air exchange. Failure to open them daily during daylight hours can increase the risk of pulmonary tuberculosis transmission by creating dampness due to poor air circulation and lack of sunlight to kill disease-causing bacteria, including tuberculosis bacteria(Nuraini, 2015).

### **The family's role in accompanying patients for regular check-ups at the health center and ensuring medication consumption.**

Based on the interview results with the participants, it was found that the family plays a role in accompanying the patient for routine check-ups at the health center, collecting tuberculosis

medication, and reminding the patient to take the medication regularly. Pulmonary TB is a chronic disease that requires long-term treatment and care, thus necessitating active involvement and support from the family in assisting pulmonary TB patients with treatment and regular check-ups at the health center. According to Krisman (2015) as cited in M. Lailatul Nur, S. Rohma, Wicakna Yoga Azar, and Yoga Wicaksana (2015), pulmonary TB is a disease that requires a considerable amount of time for healing, and patients must take medication regularly and consistently for 6-8 months (Lailatul et al., 2015).

#### **The role of the family is to remind the patient to regularly take medication.**

Based on the interview results with participants, it was found that the role of the family of TB patients is to remind them to diligently take their medication. Taking medication regularly, according to the prescribed dosage, can enhance the healing process and prevent other undesirable outcomes such as resistance to TB medication, worsening symptoms, and increased transmission to others (Kemenkes RI, 2014)

#### **The role of the family in providing motivation to pulmonary tuberculosis (TB) patients.**

Based on the interview results with the participants, it was found that the family provides motivation for regular medication intake, adherence to given rules, avoidance of smoking, and abstaining from alcohol consumption. The family, being the closest individuals to the patient, needs to provide motivation to support the patient's recovery process. The family's role in providing motivation is crucial to ensure the compliance of pulmonary TB patients so that they can take medication according to the prescribed therapy program, thus achieving recovery. Research conducted by Kristina Handriani and Sekarwati Novita (2017) found that family motivation influences the level of adherence to anti-tuberculosis medication (Kristanti et al., 2017)

### **CONCLUSION**

From the results of this research, it can be concluded that the role of the family includes providing care when TB patients cough, preventing the transmission of TB, modifying the environment, accompanying patients during routine check-ups at the Health Center, ensuring medication intake, reminding patients to regularly take medication, and providing motivation for TB patients

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