Original Research

Family Health Tasks Implementation and Medication Adherence of Pulmonary Tuberculosis Patients: A Correlational Study

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ABSTRACT

Introduction: Non-adherence medication is found among patients with pulmonary tuberculosis. Various factors influence patient adherence to medication. The purpose of this study was to analyze the relationship between family health tasks to medication adherence among patients with pulmonary tuberculosis.

Methods: The design of this study was cross-sectional, with 45 sample size of pulmonary tuberculosis patients at Polyclinic of Pulmonary Disease in Haji General Hospital Surabaya taken by using a purposive sampling technique. Independent variables of this study were family health task which includes five dimensions, recognizing the family member health problem, making decisions for appropriate treatment measures, caring for sick family members, modifying the healthy environment and utilizing the healthcare facilities. The dependent variable was medication adherence. Data were taken using the questionnaires then analyzed by Spearman rho test.

Results: There was a relation between tasks of family health: recognizing the family member health problem (p=0.001), taking decisions for appropriate treatment measures (p=0.000), caring for sick family members (p=0.003), modifying the healthy environment (p=0.006), and utilizing the healthcare facilities (p=0.001) with medication adherence in patients with pulmonary tuberculosis.

Conclusion: The research of this study suggests the hospital arrange health education for the family and the patient to increase the quality of health services. The family can provide a conducive environment for the patient and further research can develop better research by using other methods such as direct observation, demonstration, and simulation.

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INTRODUCTION

Non-adherence to medication was found as the cause of multidrug-resistant TB (MDR-TB). In 2013, the World Health Organization (WHO) declared MDR-TB as a worldwide crisis due to the number of new cases each year almost reached half a million and that cased continues to emerge with serious epidemics in some countries. Moreover, there were detected amount 136,000 cases eligible for MDR-TB treatment (WHO, 2014). The surveillance of TB prevalence in Indonesia reported positive tuberculosis smear amounted to 257 per 100,000 citizens with upper age 15 years old. The notification rate (CNR) in 2015 for all cases was 117 per 100,000 citizens (Ministry of Health Republic of Indonesia, 2016). The survey of tuberculosis prevalence in 2014, Indonesia was noticed as the second largest contributor of tuberculosis patients after India. In 2015, the East Java Province of Indonesia reported new cases of positive smear amounted to 23,183 patients, which revealed a case detection rate of t 56%, whereas the target was 70% (East Java Provincial Health Office, 2016).

Pulmonary tuberculosis is one of the world's health problems, although control efforts with the Directly Observed Treatment, Short-course (DOTS) strategy have been implemented in many countries since 1995 (Kementerian Kesehatan (Kemenkes— MOH), 2014). One of the main challenges to pulmonary tuberculosis control in Indonesia is the presence of drug-resistance, especially Multidrug-resistant TB. TB resistance rates are currently low,

but the number of MDR-TB cases tends to increase every year (Deprtemen Kesehatan Republik Indonesia, 2013). The WHO also stated that, by 2013, the world was experiencing a crisis of MDR-TB (World Health Organization, 2015). One of the contributing factors to the increase in MDR-TB cases is the lack of patient adherence in TB treatment (Kementerian Kesehatan (Kemenkes—MOH), 2014).

Non-adherence of patients in taking anti-TB drugs can be caused due to several factors, such as length of treatment period that causes boredom or feeling of healed so that patients tend to stop treatment unilaterally before the treatment program is complete (Kementerian Kesehatan (Kemenkes—MOH), 2014). The patient's personal experience of side effects from anti-TB drugs also influences the patient's compliance with the drug. Another factor that causes noncompliance of TB patients in taking medication is due to inadequate oversight of the Supervisors of Swallowing Drugs (SSD). The SSD is the person closest to the patient, as well as the health officer who oversees the patient in taking the medicine. In this case, the family is thought to be more effective in the patient's drug supervision, as the family is the immediate neighborhood of the patient. The results of interviews with some pulmonary TB patients at Pulmonary poly, General Hospital Haji Surabaya stated that they received good support from their families so that they were willing to undergo a prescribed treatment procedure, but others said that, during suffering from tuberculosis, they felt the lack of good care of their family

Green and Kreuter's (2005) behavioral theory of mentions three factors that influence the health behavior of individuals, namely (1) predisposing factors are factors that exist in the individual self, such as knowledge, attitudes, values, beliefs and others; (2) the enabling factor is a supporting factor of the individual environment, which includes the availability of human resources, accessibility to human resources, community / government regulations, priorities and commitment to health and so on; (3) the reinforcing factor is a factor that reinforces the occurrence of health behavior, family support, peers, teachers, community stores and attitudes of health care providers (Green and Kreuter, 2005).

The factor in the formulation of medication behavior of pulmonary tuberculosis patients is the presence of family support, which can be evaluated through the implementation of family health tasks. The family has a health maintenance role, which includes five family health tasks: recognize health problems in the family, take decisions for appropriate treatment measures, care for sick family members, modify a healthy environment, as well as utilize the healthcare facilities that are available around the neighborhood to the maximum. The role of families in the implementation of family health tasks is needed in the treatment process. Personal family is the main factor of patient healing. The role of the family in motivating the patient to take the medicine,

explaining that the treatment is important, helping to get the medicine, to make the patient always take the medicine, give treatment and give the impetus to recover quickly (Risnawati, 2016) will form patient compliance during treatment procedures.

Family can be an influential factor in determining the beliefs and value of individual health and establishing a treatment program they can receive (Niven, 2012). A study conducted by (Pameswari, Halim and Yustika, 2016) states that the role of the family as an SSD is necessary. The role of an SSD is to improve patient compliance to take medication regularly and uninterruptedly, increasing the patient's willingness to control and re-check the sputum according to the time specified, encouraging to recover, assisting costs (finances) for treatment, encouraging patients to rest, provide nutritious food for patients, and clean the house and environment well. (Pameswari, Halim and Yustika, 2016) also explained that, based on the results of research, some respondents said the size of family support and always reminding to take medication on time were the main reason why they were obedient. The purpose of the study was to analyze the relationship between family health tasks to medication adherence among patients with pulmonary tuberculosis

MATERIALS AND METHODS

This research uses correlational design with the cross-sectional approach. The population in this study was patients and families of pulmonary tuberculosis at Polyclinic of Pulmonary Disease in Haji General Hospital Surabaya, in July-September 2016. The inclusion criteria of this study were TB patients under intensive and advance treatment by age 18 to 54 years old with in-house family members. Patients under treatment without family assistance, the family assistance member under 21 years old were included in the exclusion criteria. The sample was chosen by a purposive sampling technique based on inclusion and exclusion criteria which resulted in a large sample of 45 patients.

The independent variable in this research is a family health task consisting of five dimensions of family health tasks: recognizing the family member health problem, taking decisions for appropriate treatment measures, caring for sick family members, modifying healthy environment and utilizing the healthcare facilities. The dependent variable is medication adherence.

The data collecting process used the instrument to collect data from patients and family about patient and family demography, family task implementation in treating the family member with TB and patient adherence to taking medication. The instrument of family health task implementation contains 40 questions taken from research conducted by Marwansyah (2012) with modifications from other researches. Determination of answer was using Likert scale, with a score range of 1 – 4. The classification of questionnaire assessment results in this study are: 1)

the highest score is the highest value weighted by the number of questions, 2) the lowest value is the lowest value weight of the number of questions, 3) range is the highest number of values minus the number of lowest values then created intervals is the range divided by the number of categories. The criteria categories are divided into three based on the mean value and standard deviation of the questionnaire question scores: 1) good: X > mean + standard deviation, 2) enough: mean-standard deviation < x < mean + standard deviation, and 3) less: x < mean-standard deviation

Instrument for adherence to medications uses MMAS-8 (Morisky Medication Adherence Scale) that contains eight questions. This questionnaire was taken from *The Journal of Clinical Hypertension* (Okello *et al.*, 2016). The questionnaire is most often used to measure compliance with the drug in hypertensive clients, but has been modified so that it can also be used to determine the level of compliance with some chronic diseases requiring long medication treatment (Morisky, Green and Levne, 1986). Determination of the answer was by using a Guttman scale, where the respondent's answer is only limited to the answer "Yes" which is given a score of 1 and "No" which is given a score of 0. The patient and family filled the questions during waiting time to control with a doctor or after treatment without interruption during treatment.

Researchers went through several phases during data collection, including requesting permission for the research activities, identification of research respondents, informed consent to research respondents willing to follow the research, replenishment of questionnaires accompanied by mentoring during the filling of questionnaires, and short interviews to selected research respondents. Data obtained were analyzed by using statistical test of Spearman Rho with degree of significance 0.05. The researcher obtained ethical permission from the Ethics Committee of the Faculty of Nursing, Universitas Airlangga, Surabaya, with number 270-KEPK.

RESULTS

The results showed that most of the TB patients were aged between 46-55 years old (24.4%), most of them female (55.6%), with the highest level of education (Senior High School) 46.7%. Most TB patients were unemployed (28.9%) and most were currently undergoing TB treatment in an advanced phase (60%). The result of the research showed that most of the family members' age was between 26-34 years old (33.3%), female (57.8%), with the highest level of education (Senior High School) 57.8% and the most jobs were entrepreneurs (31.1%) (Table 1).

The results showed that most families had performed general family health tasks in good category with frequency (62.2%). Family health tasks that have been well implemented are mostly caring for sick family members (66.7%), while family health

tasks that have not been well implemented are recognizing health problems in the family and modifying a healthy environment (Table 2).

From the results of the research in the table above can be concluded that the medication adherence for patients of pulmonary tuberculosis treatment in Pulmonary poly, General Hospital Haji Surabaya is mostly in high category, as many as 25 patients (55.6%). In the research results, there are still respondents who have low adherence level, as many as one respondent (2.2%) (Table 3).

Implementation of family health tasks in good category has high medication adherence category as many as 20 people (44.5%). In the research result, there are still families with the implementation of family health tasks in the enough category, but the level of medication adherence is low as many as one person (2.2%). The result of statistical analysis with Spearman Rho correlation test found that there is a relationship between the implementation of family health tasks with the medication adherence of TB patient. Implementation of family health task 'recognize the health problems of family members' in the good category has the highest level of medication adherence as many as 13 people (28.9%). In the research result, there are still families with family health task implementation 'recognize health problem of family members' in the less category, but having medication adherence level of moderate category as many as three people (6.6%). The results of statistical analysis with Spearman Rho correlation test obtained there is a relationship between the implementation of family health task 'recognize the health problems of family members' with medication of pulmonary tuberculosis patients. Implementation of family health task 'taking decisions for appropriate treatment' category has high levels of medication rate as many as 19 people (42.2%). In the research result, there are still families with the implementation of family health task 'taking decision for the appropriate action' in the less category, having low level of drug adherence compliance rate as many as one person (2.2%). The result of statistical analysis with Spearman Rho correlation test shows relationship between the implementation of family health task 'take decisions for appropriate action' with medication adherence of pulmonary tuberculosis patients (Table 4).

Implementation of family health task 'taking care for sick family members' in the good category has a high adherence in the drinking category as many as 21 people (46.7%). In the research result there is still family with family health task implementation 'taking care for a sick family member' in the enough category, but having low medication adherence level, as many as one person (2.2%). The results of statistical analysis with Spearman Rho correlation test found there is a relationship between the implementation of family health task 'taking care for a sick family member' with medication adherence in pulmonary tuberculosis patients. Implementation of family health task 'modifying a healthy environment' has

Table 1. Frequency Distribution of TB Patients' Characteristics

Demographic Characteristics	Patients		Family	
	n	%	n	%
Age of Respondents				
17 – 25	7	15.6	-	-
26 – 35	9	20.0	15	33.3
36 – 45	8	17.8	10	22.2
46 – 55	11	24.4	14	31.1
56 – 65	10	22.2	6	13.3
Gender				
Male	20	44.4	19	42.2
Female	25	55.6	26	57.8
Education Level				
Elementary School	16	35.6	7	15.6
Junior High School	3	6.7	5	11.1
Senior High School	21	46.7	26	57.8
Bachelor's degree	5	11.1	7	15.6
Occupation				
Student	7	15.6	-	-
Unemployed	13	28.9	4	8.9
Housewife	5	11.1	11	24.4
Entrepreneur	7	15.6	14	31.1
Traders	1	2.2	5	11.1
Government employee	1	2.2	2	4.4
Private employee	3	6.7	6	13.3
Others	8	17.8	3	6.7
Status in Family				
Husband	16	35.6	16	35.6
Wife	18	40.0	16	35.6
Child	11	24.4	13	28.9
Treatment Phase				
Intensive	18	40	-	-
Advanced	27	60	-	-

Table 2. Frequency Distribution of Family Health Tasks Implementation in TB Patients

Family Health Tasks	Categories					
	Good		Enough		Less	
	n	%	n	%	n	%
General family health task	28	62.2	17	37.8	0	0
Recognize health problems in the family	16	35.6	25	55.6	4	8.9
Take decisions for appropriate treatment	24	53.3	20	44.4	1	2.2
Care for sick family members	30	66.7	15	33.3	0	0
Modify a healthy environment	21	46.7	23	51.1	1	2.2
Utilize the health care facilities	29	64.4	15	33.3	1	2.2

high categories of medication adherence as many as 16 people (35.6%). In the research result, there are still families with the implementation of family health tasks in the enough category, but the level of medication adherence is low as many as one person (2.2%). The result of statistical analysis with Spearman Rho correlation test showed that there was a relationship between the implementation of family health task 'modifying a healthier environment' with the adherence of taking the medicine for pulmonary tuberculosis patients. Implementation of family health task 'utilizing good health care facilities' has a high level of adherence to taking medication category as many as 21 people (46.7%). In the research result, there is still family with family health task implementation 'utilize health care facility' in the enough category, but low level of adherence of medication as many as one person (2.2%). The results of statistical analysis with Spearman Rho correlation test found that there is a relationship between the

implementation of family health task 'utilize the available health care facilities' with the adherence of taking medication for pulmonary tuberculosis patients (Table 4).

DISCUSSION

Relationship between family health tasks implementation and medication adherence

The results of the study reveals a significant relation between family task implementation and patient adherence in taking medication. The adherence in taking medication will increase when the patient has the support from the other family members during treatment. In relation to the study, results declared that compliance in treatment will increase when patients get help from the family (Ramizer cited in Maulidia, 2014). The family is the first and closest unit to the patient, the family knows about the condition

Table 3. Frequency Distribution of Medication Adherence in TB Patients

Measured Variables	Categories	n	%
	High	25	55.6
Medication Adherence	Medium	19	42.2
	Low	1	2.2

Table 4. Relationship Between Family Health Tasks Implementation and Medication Adherence

Indicators	Medication Adherence						p	r
	High		Medium		Low			
	n	%	n	%	n	%		
Family Health Tasks Implementation								
Good	20	44.5	8	17.7	0	0		
Enough	5	11.1	11	24.5	1	2.2	0.004	0.423
Less	0	0	0	0	0	0		
Total	25	55.6	19	42.2	1	2.2		
Recognize Health Problems in The Family								
Good	13	28.9	3	6.6	0	0		
Enough	12	26.8	13	28.9	0	0	0.001	0.475
Less	0	0	3	6.6	1	2.2		
Total	25	55.7	19	42.1	1	2.2		
Taking Decision For Appropriate Treatment								
Good	19	42.2	5	11.1	0	0		
Enough	6	13.3	14	31.2	0	0	0.000	0.538
Less	0	0	0	0	1	2.2		
Total	25	55.5	19	42.3	1	2.2		
Taking Care for Sick Family Member								
Good	21	46.7	9	20	0	0		
Enough	4	8.9	10	22.2	1	2.2	0.003	0.426
Less	0	0	0	0	0	0		
Total	25	55.6	19	42.2	1	2.2		
Modifying a Healthy Environment								
Good	16	35.6	5	11.1	0	0		
Enough	9	20	13	28.9	1	2.2	0.006	0.407
Low	0	0	1	2.2	0	0		
Total	25	55.6	19	42.2	1	2.2		
Utilizing Health Service Facilities								
Good	21	46.7	8	17.8	0	0		
Enough	4	8.9	10	22.2	1	2.2	0.001	0.474
Less	0	0	1	2.2	0	0		
Total	25	55.6	19	42.2	1	2.2		

of the patient's illness as well as most often communicates with the patient. Open and two-way communication in the family will greatly support the TB patient, reminding each other and motivating the patient to continue the treatment can obtain the healing process. The family role in TB patient care can be a good social support for each family member (Hannan and Hidayat Syaifurahman, 2013).

It was found that the implementation of good category family health tasks mostly has high levels of medication adherence, but there is also the implementation of family health tasks in the enough category to have low adherence level of medication. The condition is due to the factors that underlie compliance behavior, not only from family factors alone, but many other factors become influential, for example, from an individual's factors themselves. An individual who has an unhealthy behavior, even though his or her family's support is good, will still have an effect on the level of medication adherence.

In this study, the family task implementation which was mostly good was caring for the sick family member, while the tasks about knowing family health problem and environment modification were less. The less understanding about those problems will result in the lower achievement of family task implementation in caring for a family member with TB. It's also proven by Freadman (2010 cited in Nurhidayati, Dhian, & Khoirunisa,2016) who stated that families have a role to carry out healthcare practices, namely to prevent the occurrence of health problems and care for family members who are sick.

The ability of families to carry out healthcare or maintenance can be seen from family health tasks carried out. Families who can perform good family health tasks means they are able to solve health problems that exist in family members. The role of the family in the implementation of good family health tasks is a powerful motivation or support in encouraging patients to seek treatment regularly as recommended (Pare, Amiruddin and Leida, 2010).

Research conducted by Herawati (2011) states that the family has an important role in the prevention of transmission of TB disease. Green states that the health of a person or society is influenced by two factors, namely behavioral factors and environmental factors. One's own health behavior is influenced by three factors, namely predisposing factors, enabling and reinforcing. Predisposing factors are internal factors that exist in the individual, enabling factors are supporting factors that encourage the realization of healthy behaviors such as healthcare facilities, while reinforcing factor is a strengthening factor such as support from family, teachers, community leaders, health workers and others (Nursalam, 2014).

The health behavior of TB patients in terms of medication adherence is also influenced by some factors. One of the important factors that plays an important role in the formation of patient medication behavior of pulmonary tuberculosis patients is the existence of family support, which can be evaluated through the implementation of family health tasks. Family support greatly supports the success of one's treatment by always reminding the patient to take medication on a regular basis, providing good care during the patient's treatment process, giving understanding and passion to the patient to remain diligent and regular in treating. The presence of family health and duties and tasks will have a psychological impact on patient compliance in the treatment process. Families who have been able to perform family health tasks well will establish good health behavior also, which in this case is behavior of medication adherence.

Relationship between family health task implementation: recognize health problems in the family and medication adherence

Recognizing family health issues is very important, because family health cannot be ignored (Ayuningtiyas, 2013). The family acts as the first to recognize a health problem in one of the family members. Health problems in the family can be resolved immediately if the family is able to recognize the health problems experienced by one member of the family.

Recognizing family members' health problems is a prelude to identifying family needs according to the situation (Kausar, Herawati and Pertiwiwati, 2015). The health of family members is very important to note. Health can be a great resource to meet the welfare of each family member. Families should be able to understand every health problem that occurs in family members even though it is a small thing. The slightest changes experienced by family members will be a concern in family decision-making. The better the family's ability to familiarize themselves with family health problems the easier it will be for families to overcome the health problems experienced by a family member (Handayani, 2014).

Family ability to recognize health problems is not only in the context of the disease alone, but the family must also be able to recognize how the treatment process is, the problems that may occur during the treatment process, prevention and what are likely to occur if the lung TB patient does not undergo the treatment process that has been established. Families should be aware that long-term TB treatment processes will make TB patients feel bored with their treatment, so the family is expected to motivate and act as a supervisor in the patient taking the medicine in order to keep the patient obedient in taking the medicine (Marwansyah, 2012)

The result of the research showed that most TB patients' family's ability in Polyclinic of Pulmonary Disease in Haji General Hospital, Surabaya in recognizing health problem of family members is in the enough category (55.7%) with medication compliance level mostly in the medium category (28.9%). This is in accordance with Handayani's statement (2014) that the family's ability to familiarize themselves with family health issues will affect the outcomes of family problem solving.

The family's ability to recognize family health problems is one of the processes of gaining knowledge. Knowledge is influenced by two factors: internal factors and external factors. Internal factor includes education. The educational level of a person will have an effect on the understanding of an experience and stimuli provided through learning and other media. Knowledge will affect one's behavior as intermediate impact of the given stimulus (Zulfitri, Agrina and Herlina, 2012). Wahyudi, Upoyo, and Kuswati (2008) also stated that the higher the education of a person, the better the knowledge related to health problems. The results obtained data that most of the family education is high school (46.7%), the level of education is not high, but also not classified as low. This is what causes the family's ability in knowing the health problems of family members to still be in the enough category.

Recognizing the health problems of family members is an early stage to determine the next action to address the health problems experienced. The family's ability to familiarize themselves with family health issues can help families establish what measures are appropriate for family members in order to improve their health status. If the family has been able to familiarize themselves with family health issues, particularly in TB patients, then they will consider the possibilities that may occur during the treatment process so that they can anticipate any problems.

Relationship between family health task implementation: taking decisions for appropriate treatment and medication adherence

The family is the primary key in decision-making and therapeutic care at every stage of sick family members (Setiadi, 2008). The family's ability to make the right decisions is the primary family effort to seek appropriate help according to family circumstances, taking into account who among family members has the ability to perform this task. Family health measures are expected to be appropriate to family circumstances (Marwansyah and Sholikhah, 2015). The family's ability to make the right decisions has an impact on the adherence of the pulmonary tuberculosis patient's medication. The accuracy and speed of the family in decision-making will affect the healing rate of TB patients. The sooner the family takes the decision, the sooner the family overcomes the health problems experienced by family members, in this case related to the adherence of taking the medicine for pulmonary tuberculosis patients (Kausar, Herawati and Pertiwiwati, 2015) Marwansyah and Sholikhah (2015) also stated that the ability of families to make good decisions can have a positive impact on ailing family, while, if the ability of the family is less able to negatively impact a sick family member, the sufferer may feel unnoticed.

Wahyudi et al. (2008) explain that, in the implementation of this decision-making task, the family will feel disturbed by the illness experienced by the patient; therefore, the family is rich to find the right treatment for the patient so the patient will recover from his illness. The family also strives to keep an eye on patients in undergoing a prescribed treatment program so that the treatment runs smoothly and the patient becomes obedient so that will accelerate the healing of the disease.

The family's ability in decision-making for appropriate action in this study was good (53.5%). It was also shown by the adherence of good or high TB drug patients (42.2%). These data suggest that the more accurate and quicker the decisions taken by the family will increase the compliance of TB patients in taking OAT drugs.

Decision-making for appropriate action can help the family in resolving family members' health problems. The family's ability to interpret the illness experienced by family members is influenced by the family's experience of the disease. If the family has been able to recognize the illness suffered by family members, then the family will be able to decide and take the attitude to overcome the illness experienced. Similar to TB patients, if the family has been able to recognize TB disease, including the old treatment process, the family will be able to make decisions when problems occur in patients during the treatment process.

Relationship between family health task implementation: taking care for sick family member and medication adherence

The main function of the family is family care, where the family provides preventive health care and jointly cares for the family members who are sick. The ability of the family in carrying out healthcare or maintenance can be seen from the task of family health that it does (Mubarak, Chayatin and Santosa, 2010). Setiadi (2008) explains that the family, in carrying out its functions, must understand about the illness experienced by family members, know the nature and development of care needed, know the sources in the family, know the existence of facilities needed for care and family attitudes toward sick family members. The family can perform simple maintenance in accordance with the ability, whereby the care of this family can be attempted to prevent side effects or complications of the disease to a minimum.

Notoatmodjo (2003) states that, after someone knows the stimulus or health object, then they will implement and practice what they know. When families are aware of the health problems of their family members, families can help family members take proper care of the health problems experienced.

The result of the research shows that the family health task that has been done well is taking care of a sick family member. This is because the family and patients of TB who seek treatment in Polyclinic of Pulmonary Disease in Haji General Hospital Surabaya always get assistance from the nurse on duty. The family always asks the nurse if problems occur or there are complaints during TB treatment. Nurses in Pulmonary poly, General Hospital Haji Surabaya also always provide health education on how to care for pulmonary tuberculosis patients to overcome the complaints that occur during treatment.

Families in caring for pulmonary tuberculosis patients should know about pulmonary tuberculosis and treatment programs that the pulmonary tuberculosis patient must undergo. In the treatment process, pulmonary tuberculosis patients are required to take many drugs, some of which have various side effects. Drug side effects that are too heavy will make TB patients reluctant to take the medicine again because they think it feels worse when taking the medicine. The family's ability to care for pulmonary tuberculosis patients has a major impact on the family's ability to cope with the side effects experienced. The better the family ability to overcome the side effects of taking medicine in pulmonary TB patients, the better the willingness of TB lung patients to complete the treatment program. The high motivation of the family with proper care will improve patient adherence in the prescribed treatment.

Relationship between family health task implementation: modifying a healthy environment and medication adherence

Modifying the environment is identical to how to make the environment a therapeutic place for patient recovery. In addition to the physical environment, the psychological supportive environment for sick family members also needs attention (Effendi and Makhfudli, 2009).

Modifying the environment to ensure family health is also important in family health tasks, as the health of family members is influenced by lifestyles, stress and the environment. Family health can be guaranteed by taking into account the environmental factors of residence (Handayani, 2014). Modifying the environment can help in the care of family members who experience health problems, in the form of home hygiene and creating comfort in order to rest in peace without any interference from outside. Health improvement and maintenance is essential, especially through the commitment and modification of the environment and family lifestyle. This will increase the role of the family in carrying out its responsibilities to the health of family members (Setiadi, 2008)

The ability to modify a good environment will minimize transmission of TB disease to other family members. Maintaining a healthy and conducive home environment will help TB patients to maintain their body resistance so that they can avoid other diseases during their treatment program. If a TB patient is suffering from another disease, it will allow them to take other medications. This will increase the amount of drugs consumed by patients, so it tends to potentially cause psychological problems in the patient, which will affect the patient's compliance in taking the drug. Therefore, families are required to have good skills in modifying a healthy environment for TB patients in order to ensure better adherence to TB drug treatment.

Relationship between family health task implementation: utilizing health service facilities and medication adherence

Family perception about healthy pain is closely related to behavior seeking for treatment. Family responses when there are family members who experience family health problems are very varied, ranging from not doing anything with the excuse not to interfere, performing certain actions such as treat yourself, seeking traditional medical facilities, finding drugs in drug stalls, seeking treatment to service facilities of modern health organized by the government or private, to seeking modern treatment organized by practicing physicians. This will affect whether or not health facilities are available (Notoatmodjo, 2007)

Pulmonary tuberculosis is a disease with a lengthy period for the healing process, that is patients should consume drugs regularly and on time. If this is not the case, then the healing process will experience obstacles, or the other possibility is that there can be resistance to TB drugs (MDR-TB). Resistance to TB drugs will cause TB patients to repeat the treatment process. The process of treatment will be extended longer, the number of drugs consumed will also be increase. This condition will lead to problems in the psychological condition of the patient that will lead to non-adherence with medication (M, Rohmah and Wicaksana, 2015).

Utilizing health care facilities needs to be done, not only to maintain the health stability of pulmonary TB patients, but also to ensure that drug taking is done on time. Often the ability of families to reach health facilities becomes an obstacle for families to bring TB patients to health facilities. It also relates to the accuracy of pulmonary TB patient drug preparation (Handayani, 2014)

The family as a patient's medicinal overseer should ensure that patient drug taking should not depart from the schedule set by the health worker. Delay in taking drugs will make the patient late also in taking the medicine, so if left continuously it will lead to resistance to TB treatment. This will make the TB patient repeat the treatment process with increased number of medicines and longer time span, which will make the patient feel bored because they have to consume drugs continuously. This condition will affect patient compliance in taking OAT drugs. Therefore, the family should be able to utilize the health service facilities that are well available to support the cure of patients with drug medicine in the high category.

CONCLUSION

The results of data analysis with the Spearman Rho trial showed that there was a significant relationship between carrying out family task and medication adherence of TB patients. Adherence to medication will increase when patient get help from family. The family is the first and closest unit to the patients, the family knows about the disease, and also the patients and is who most often communicates with the patients. Open and two-way communication within the family will greatly support TB patients; asking for one another and motivating help to continue treatment can improve the healing process. The role of the family in the care of TB patients can be a social support for family members.

Implementation of family health tasks of pulmonary tuberculosis patients who seek treatment at Pulmonary poly General Hospital Haji Surabaya is mostly in the good category. Medication adherence of pulmonary tuberculosis patients treated in Pulmonary poly General Hospital Haji Surabaya is included in the category of high compliance. Family health tasks in caring of pulmonary tuberculosis patients have a significant relationship with the level of medication adherence of pulmonary tuberculosis patients in Pulmonary poly General Hospital Haji Surabaya. Family health task 'recognizing the health

problems of family members' has a significant relationship with the medication adherence of pulmonary tuberculosis patients who seek treatment at Pulmonary poly General Hospital Haji Surabaya. Family health task 'making decisions for appropriate action' has a significant relationship with medication adherence of pulmonary TB patients treated at Pulmonary poly General Hospital Haji Surabaya. Family health task 'taking care for sick family members' has a significant relationship with the medication adherence of pulmonary tuberculosis patients who seek treatment at Pulmonary poly General Hospital Haji Surabaya. Family health task 'modifying the environment' has a significant relationship with the medication adherence of pulmonary tuberculosis patients who seek treatment at Pulmonary poly General Hospital Haji Surabaya. Family health task 'utilizing available health care facilities' has a significant relationship with medication adherence of pulmonary TB patients treated at Pulmonary poly General Hospital Haji Surabaya.

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