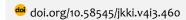Check for updates

The Relationship Between Self Confidence and Compliance Medication in Pulmonary Tuberculosis Patients

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Abstract

Pulmonary tuberculosis (TB) is a chronic infectious disease caused by Mycobacterium tuberculosis. Long treatment times cause sufferers to often be threatened with dropping out of treatment and feeling less productive because they suffer from pulmonary TB which will result in individuals having a low level of self-confidence within themselves. The aim of this research is to determine the relationship between self-confidence and adherence to taking medication in pulmonary TB sufferers at the Mojowarno Jombang Community Health Center. The method used in this research is Observational Analytical, with a Cross-Sectional approach. Amount 27 rospondents obtain using purposive sampling. The independent variable is self-confidence and the dependent variable is compliance with taking tuberculosis medication. The instruments used in this research were the TBSES-21 (Tuberculosis Self-Efficacy Scale) questionnaire and MMAS-8 (Morisky Medication Adherence Scale) compliance with chi square test data analysis. The results of this study showed that the majority of respondents had moderate confidence and were compliant in taking tuberculosis medication. After testing the research results, there was a relationship between belief and compliance with taking tuberculosis medication. Increase knowledge and foster motivation to carry out treatment as recommended by Health officials

Keywords: Compliance, Self-confidence, Tuberculosis

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1. BACKGROUND

Pulmonary Tuberculosis is a chronic infectious disease caused by Mycobacterium Tuberculosis. Based on the TB Prevalence Survey by the Indonesian Ministry of Health's Research and Development Agency, it is known that Indonesia is the second country with the most TB cases in the world after India. Long treatment times with more than one type of drug mean that sufferers are often threatened with dropping out of treatment, therefore this disease really needs attention to be addressed (Ministry of Health of the Republic of Indonesia, 2015). Pulmonary tuberculosis is a disease of global concern today. Various control efforts have been made, but the number of sufferers and the

number of deaths is still large, in 2014 an estimated 1.2 million people died from tuberculosis (Hasanah, 2017).

Pulmonary Tuberculosis (Pulmonary TB) is the most common infectious disease in the world with an estimated one-third of the population infected and 2.5 million people dying every year (World Health Organization, 2018). Pulmonary TB sufferers in Indonesia are the 3rd largest in the world after India and China with the number of clients around 10% of the total number of pulmonary TB clients in the world. Meanwhile, of the number of pulmonary TB sufferers who are undergoing treatment, only 40% comply with taking Anti-Tuberculosis Drugs (OAT) according to the regulations (Kementerian Kesehatan RI, 2019).

Data obtained from TB program holders at the Mojowarno Community Health Center, at the beginning of 2023, 289 suspected pulmonary TB patients were found and 78 people were positive for pulmonary TB in the Mojowarno Community Health Center area. Based on the data included in the TB suspects in the period January to June 2024, there were 67 people and 27 people were positive for pulmonary TB. The results of a preliminary study conducted in the TB room at the Mojowarno Community Health Center on Monday, February 19 2024, obtained data on self-confidence regarding pulmonary TB disease and the level of adherence to taking OAT in sufferers. For the level of self-confidence, 4 people had sufficient self-confidence and 6 others had less. Meanwhile, for the level of compliance, 6 people were obedient and 4 people were disobedient.

The success of TB treatment is determined by the patient's level of compliance while taking OAT completely until completion (Gunawan et al., 2017). Compliance is an important component in a treatment program (Edi, 2020). Compliance with the patient's treatment process can be influenced by the level of knowledge, family support, self-stigma and self-confidence (Wulandari et al., 2020). Family support is one of the factors that can influence patient treatment compliance because the family is the person closest to the patient as well as the person who has an important role as a drug swallowing supervisor (PMO) in TB patients (Irnawati et al., 2016) as well as health workers who are at fault. one source of information and support during the patient's treatment process (Zainal et al., 2018).

However, the role of family and health workers alone is not enough if the

patient does not have the confidence and enthusiasm to recover, which in this case is called self-confidence. Self-confidence is a person's belief in his or her ability to achieve a desired goal (Bandura et al., 1997). What is meant is carrying out a TB treatment program according to the recommendations of health workers (Novitasari, 2017). Low self-confidence will cause failure during the treatment process (Widyaningtyas et al., 2020). Therefore, TB patients must have high self-confidence in order to be able to adhere to treatment to achieve recovery.

Several previous studies have revealed a relationship between self-confidence and treatment adherence in TB patients (Hanif, 2018; Sutarto et al., 2019; Isnainy et al., 2020; Widyaningtyas et al., 2020; Wulandari et al, 2020). Research conducted by Yulianti (quoted in Wulandari, 2020) said that high self-confidence is directly proportional to treatment compliance, meaning that the higher the patient's self-confidence, the higher the level of compliance. Based on the above background, researchers are interested in conducting further research regarding "The relationship between self-confidence and adherence to taking medication in pulmonary TB sufferers at the Mojowarno Jombang Community Health Center".

2. METHODS

The method used in this research is Observational Analytical, with a Cross-Sectional approach. The sample in this research amount 27 pulmonary TB sufferers at the Mojowarno Jombang Community Health Center that obtain with purposive sampling. The independent variable is self-confidence and the dependent variable is compliance with taking tuberculosis medication. The instruments used in this research were the TBSES-21 (Tuberculosis Self-Efficacy Scale) questionnaire and MMAS-8 (Morisky Medication Adherence Scale) compliance with chi square test.

3. RESULTS

Table 1. Frequency distribution based on respondent characteristics in pulmonary TB sufferers at the Mojowarno Jombang Community Health Center (N=27).

Characteristics	Frequency	Percentage (%)
Gender		
Male	17	63
Female	10	37

Characteristics	Frequency	Percentage (%)
Age		
Late adolescence (17-25 years)	3	11.1
Early adulthood (26-35 years)	2	7.4
Late adulthood (36-45 years)	11	40.7
Early elderly (46-55 years)	4	14.8
Late elderly (56-65 years)	3	11.1
Seniors (> 65 years)	4	14.8
Education		
Not attending school	2	7.4
Primary	8	29.6
Junior high	10	37
High school	6	22.2
University	1	3.7
Occupation		
Civil servant	1	3.7
Self-employed	11	40.7
Private	8	29.6
Not working/Retired	7	25.9
TB treatment		
1 month	2	7.4
2 months	3	11.1
3 months	6	22.2
4 months	8	29.6
5 months	8	29.6
6 months	0	0
Drug Swallowing Supervisors (PMO)		
Family	24	88.9
Neighbors	1	3.7
Health workers	2	7,4
Caregivers	0	0
None	0	0

Based on the results of the study, most of the respondents were male, as many as 17 respondents (63%), while almost half of the respondents were late adults, as many as 11 respondents (40.7%), and had a junior high school education, as many as 10 respondents (37%). Almost half of the respondents were self-employed, in the TB treatment period of 4 to 5 months, and almost all respondents were under the supervision of taking medication by their families, as many as 24 respondents (88.9%).

Table 2. Frequency distribution based on self-confidence in TB patients (N=27)

Self-confidence	Frequency	Percentage (%)
Low	8	29.6
Moderate	15	55.6
High	4	14.8
Total	27	100

Based on the table 2, most respondents have moderate self-confidence, as many as 15 respondents (55.6%) and a small portion have high self-confidence, as many as 4 respondents (14.8%).

Table 3. Frequency distribution based on medication compliance in TB patients

Compliance	Frequency	Percentage (%)
Non-compliant	7	25,9
Compliant	20	74,1
Total	27	100

Based on the table 3, most respondents are compliant in taking TB medication and a small portion is not compliant in taking TB medication, as many as 7 people (25.9%).

Table 4. Cross-tabulation of the relationship between self-confidence and medication compliance in TB patients

Self confidence	Medication compliance				Total		P Value
	Non-compliant		Compliant				
	f	%	f	%	f	%	
Low	4	100	0	0	4	100	
Medium	3	25	12	75	15	100	p=0,001
High	0	0	8	100	8	100	
Total	7	35	20	65	27	100	

Based on the table 4, it was found that respondents with low self-confidence were 4 out of 27 respondents, among them there were respondents who were not compliant in taking TB medication as many as 4 respondents (100%). There were respondents with moderate self-confidence as many as 15 out of 27 respondents, among them there were respondents who were not compliant in taking TB medication as many as 3 respondents (25%) and compliant in taking TB medication as many as 12 respondents (75%). There were respondents with high confidence as many as 8 out of 27 respondents, among them compliant in taking TB medication as many as 8 respondents (100%). The results of the statistical test obtained p <0.005 which means that there is a relationship between self-confidence and compliance in taking medication in TB patients in the Mojowarno Jombang Health Center area

4. DISCUSSION

The results of the study showed that most of the respondents were male. This is in line with research by Dhewi et al (2011), Amalia (2020), and Riskesdas (2018) that men are very susceptible to pulmonary tuberculosis. This is because men who have a habit of smoking and drinking alcohol

tend to reduce their immune system. This smoking habit can interfere with the immune system of the respiratory tract, making them more susceptible to infection.

Almost half of the respondents were late adults, the age range of respondents most affected by pulmonary TB infection was the productive age. According to Elizabeth (2017) and Hayati (2018), the average productive age prefers to spend their energy and time working so that their rest time decreases. This can weaken the immune system, making patients more susceptible to pulmonary tuberculosis. In addition, mobility, activity levels, and jobs that are productive workers are susceptible to TB bacteria.

Almost half of the respondents were junior high school graduates, compliance with OAT treatment in patients with pulmonary tuberculosis was related to the respondent's education level. According to the Indonesian Ministry of Health (2019), the higher the level of education, the more insightful in obtaining information about the treatment of the disease, the more often the treatment is carried out (Ministry of Health of the Republic of Indonesia, 2019). According to Sudanyani (2013), a high level of education can provide a good perception of pulmonary tuberculosis treatment because patients have a better understanding of the information provided

for treatment. In addition, low education results in difficulty in accepting new information and having a less open mindset and there are still some patients with an elementary school education background.

Almost half of the respondents work as self-employed, this study is supported by other researchers Amalia (2020) and Pambudi (2019) who said that not all self-employed workers work in open spaces, but also in closed spaces can trigger infection with pulmonary TB. Rooms with humid temperatures and less exposure to sunlight cause TB germs to live there when there are workers infected with TB so that transmission can be faster.

Based on this study, most respondents have moderate self-confidence. Self-confidence is an attitude of self-confidence or self-belief in a person's ability to show one's behavior in the desired results (Yusuf & Nurihsan, 2011). Sunda's research (2019) said that self-confidence or self-confidence accompanied by patient perception can increase patient compliance in taking medication. Therefore, the patient's efforts to improve their cognitive, role, physical, emotional, and social functions can increase self-confidence.

Based on the results of the self-confidence questionnaire, it can be concluded that patients always take

medication in the right way, seek treatment and take medication to the Health Center on time, and believe that pulmonary TB will be cured. This is reinforced research by Herawati & Purwanti (2018), which reported that patients with high self-confidence adhere to the OAT treatment program for up to 6 months with timely treatment, with the right dosage, and are able to manage the side effects of the drug. Patients hope to recover from pulmonary TB, but there are still some respondents who feel unwanted side effects of OAT and patients must continue taking medication until the patient is completely cured of TB until it is confirmed that the patient has completely recovered from pulmonary TB by the doctor. Meanwhile, low self-confidence can be due to not being able to overcome boredom from the long treatment and side effects of OAT, causing boredom in consuming medication routinely and forgetting to consume it (Kawulusan et al., 2019).

Most respondents were compliant during their TB treatment. TB patients who are compliant with their treatment are patients who are able to complete their treatment completely and regularly without stopping taking their medication for 6 months. Respondents' compliance with taking TB medication and always

making regular check-ups at the Health Center. In addition, patient compliance in taking medication is due to the support of their family as PMO (Drug Supervisor). According to Salim's research (2015), the presence of a drug supervisor from the family during TB patients undergoing TB treatment from start to finish, such as supervising TB patients every time they are going to take this medication, can encourage patients to take their medication regularly. In addition, PMO helps patients remember to have repeated sputum tests at the Health Center.

According to the researcher's assumption, medication compliance in TB patients is very important because if patients are not compliant in taking medication, the patient will not recover, it seems that taking medication routinely for 6 months should not be forgotten even in taking medication because if they forget, they will have to start over again. The non-compliance of pulmonary tuberculosis patients to take medication completely is because pulmonary TB medication must be consumed for a long period of time so that it will cause psychological pressure for sufferers because they have to undergo long treatment. The results of this study using chi square obtained p = 0.001 which means that there is a relationship between self-confidence and medication compliance in

TB patients in the Mojowarno Jombang Health Center area. In line with the research of Novitasari (2017) and Herawati & Purwanti (2018), also found a relationship between self-efficacy and medication compliance in pulmonary tuberculosis patients. According to Sutrisna (2017), compliance in pulmonary tuberculosis patients is influenced by the effectiveness of self-medication. Self-efficacy is one of the key factors in exercising personal control. This includes maintaining one's own health. Self-efficacy is also related to a person's self-confidence about their ability to achieve a certain level of success through the actions taken (Sejati, 2013).

Treatment success is based on the patient's experience completing treatment from the intensive phase to the ongoing phase. The patient's high level of self-efficacy, coupled with self-confidence in recovery and self-awareness of the need for regular drug treatment, allows the patient to maintain this habit (Noorratri et al., 2017) and to comply with OAT treatment (Novitasari, 2017).

5. CONCLUSION

Based on the results that self-confidence in pulmonary tuberculosis patients in the Mojowarno Jombang health center area is almost half of the respondents have moderate self-confidence. The compliance with taking medication is mostly compliant in taking medication. There is a relationship between self-confidence and compliance with taking medication in pulmonary tuberculosis patients in the Mojowarno Jombang health center area

AUTHOR CONTRIBUTIONS

The author contributes all research activities. Conceptualization, analysis, writing and manuscript revisions.

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest in this research.

DATA AVAILABILITY STATEMENT

The data are available from the corresponding author upon reasonable request.

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