Determinant of Incompliance Medication People with Tuberculosis Disease

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Abstract

Indonesian Tuberculosis (Tb) case is the highest third rank in the world. It is caused by disobedience in therapy. Three factors affect medication compliance include predisposing, reinforcing and enabling factors. This research aims to analyzed factors that affects medication compliance in Indonesian Tb patients. The study was analytical research. The population were 119 Tb patients in Surabaya Health care center, Indonesia. Simple random sampling technique was used to take sample, consist of 93 respondents. The variables of this study were predisposing factors, reinforcing factors and enabling factors. The data was collected with questionnaires and analyzed with chi square test. The study showed that all factors related to incompliance medication people with Tb, namely predisposing factors: knowledge, attitude, belief (p=0.000), trust (p=0.013, and values (p=0.001); reinforcing factors: family support (p=0.034) and healthcare personnel support (p=0.022); and enabling factors: healthcare facility (p=0.000) and physical environment (p=.000). The determinants of incompliance medication people with Tb include predisposing factors (knowledge, attitudes, beliefs, trust and values); reinforcing factors (family and healthcare personnel support); and enabling factors (healthcare facility and environment). Tackling incompliance medication on Tb should involve private sector, family sector, society/healthcare sector and government sector.

Keywords: *Tuberculosis, predisposing, reinforcing, enabling*

Introduction

The WHO reports there are three issues related to tuberculosis. The first issue is high pain and mortality figures due to Tb. Tb became the second largest disease killer infection. The second issue is that almost three million Tb cases are not detected by the health system, both undiagnosed and diagnosed but not checked. The third issue is the increase of MDR-TB case[1]. Indonesia has a free TB program in 2035, with efforts among others: ensuring that 95% of TB cases get treatment and increased 90% of treatment success[2].

The Millennium Development Goal targets for 2015 of reducing TB prevalence and deaths by half globally has made some impact on the burden of targeted diseases, including TB. The number of TB cases in Indonesia is in the ranks of three worlds after India and China[3]. On the national scale, the number of TB cases in East Java was at the rank of two after West Java. Based on the results of a survey in Healthcare Surabaya in September 2018 was obtained the number of TB sufferers of 121 people, this number is included from the number of patients with lung tuberculosis both children and adults. Based on the observation data obtained by 10% sufferers are reminded by PMO (supervision of drug swallowing), then by 15% sufferers experience a drug drop out, and as high as 3% died due to TB.

Factors affecting one's adherents as discussed in Precede and proceed theories by Lawrence Green include predisposition factors, supporting factors and reinforcing factors[4]. The predisposition factor is a factor that exists in a person, among them the knowledge, attitudes, beliefs, and values that a person believes strongly affects

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how the person's behavior is to obey in taking medicine. Determining the success of tuberculosis therapy is one of the patient's compliance with therapy. Compliance is a behavior that complies with the order to comply with the regulations. In achieving the objective of compliance with TB drugs need to be used to become a living norm and culture of TB sufferers so conscious and self-reliant for healthy living. However, growing an awareness of compliance with TB drug, need an action that can motivate correctly and consistently.

Therefore, it is important for people with TB to complete the therapeutic program well. In other words, adherence to the sufferer for the cure of TB disease is useful to improve patient's compliance in taking medicine, it is necessary information addressed to the sufferer on how important it is to take medication, give confidence in healing, and provide consultation for the sufferer and family.

Materials and Methods

This Design research is an analytical study using the cross-sectional approach. The population in this study is the patient with lung tuberculosis who came to medicine at the Perak East Surabaya Health Center for 119 people. A large sample is 93 respondents were taken using probability sampling techniques with simple random sampling. Independent variables in this study are predisposing factors (knowledge, attitudes, beliefs and values); Enabling factor (health facilities, environment); Factor reinforcing (living support and healthcare personnel support) and dependent variables are adherence to taking medication. Data collection instruments using questionnaires with a check list. Data analyzed using Chi square test.

Results and Discussion

Table 1. Characteristics of participants ' socio-demography (n=93).

Socio-demography	Category	N	%
Age	Children	9	9,8 %
	Teen	15	16 %
	Adult	40	43 %
	Elderly	29	31,2 %
	Total	93	
Sex	Male	54	58 %
	Female	39	42 %
Education level	Basic	17	18 %
	Medium	47	51 %
	Top	24	26 %
	High	5	5 %
Work	Not working	51	55 %
	Work	42	45 %
suffering from TB	Category 1	45	48 %
	Category 2	26	28 %
	Category 3	22	24 %

Table 2. Determinant of Incompliance Medication People with Tuberculosis Disease (n=93).

Variable	Medication Compliance				p-Value
	Obedient		Disobedient		
	f	%	F	%	
Predisposing factors					
Knowledge					
Good	50	100	0	0	0.000
Poor	26	60.5	17	39.5	
Attitude					
Positive	49	98	1	2	0.000
Negative	27	62.8	16	37.2	
Beliefs					
Positive	55	93.2	4	6.8	0.000
Negative	21	61.8	13	28.3	
Value					
Positive	38	97.4	1	2.6	0.001
Negative	38	70.4	16	29.6	
Reinforcing factors					
Family support					
Good	62	86.1	10	13.9	0.034
Enough	13	68.4	6	31.6	
Poor	1	50	1	50	
Healthcare personnel					
Good	60	87	9	13	0.022
Enough	15	68.2	7	31.8	
Poor	1	50	1	50	
Enabling factors					
Health facility					
Good	22	73.3	8	26.7	0.000
Enough	40	83.3	8	16.7	
Poor	14	93.3	1	6.7	
Environments					
Good	32	84.2	6	16.8	0.000
Enough	31	79.5	8	20.5	
Poor	13	81.6	3	18.4	

Factor predisposing

Predisposing factors are defined as personal characteristics or populations that motivate individuals in adopting certain health behaviors; This includes knowledge, values, and attitudes that may explain individual behavior[4].

Knowledge is one of the domains of behavior formation in the treatment of tuberculosis[5]. Patient knowledge needs to be improved, especially knowledge about treatment procedures (how to take medication, drug side effects and taking the drug until complete is not interrupted)[5,6,7].

Patients' lack of comprehensive information about Tb and its treatment at the start of treatment make incomplete treatment[8]. The more information received can increase the knowledge of TB sufferers and the more obedient to take medication. Compliance is a person's obedience to a commandment, self-awareness is increasingly open with only the information obtained. The increase in knowledge is not absolutely obtained in formal education, but also can be obtained in non-formal education such as, counseling, health seminars, and health counseling[9].

Attitude has not been an action (open reaction) or activity, but it is a predisposition of behavior (action), or a closed reaction is not a readiness to react to objects in a particular environment as an action to the object. Attitudes have a significant influence on the obedience of a person in taking medicine. Attitudes are an underlying form to be willing and submissive in this respect in taking the medicine. Exposure that is often given to a person affects the individual in decision-making and acting. The compliance attitude of taking medication and having a diet has the opportunity to heal very large. While disobedience can extend the pain and increase the severity of the disease[9].

Belief is one's willingness to rely on others where he has faith in him. Trust is a mental condition based on a person's situation in the social context. Healthy lifestyle is the choice that one has for his life for those who believe that the disease comes from a wrong lifestyle will always keep his lifestyle to be healthy. In line with the health theory belief models that trust can affect health. Tb was curable. This belief needs to be matched to the patient, so that the patient has the motivation to heal by undergoing complete treatment[10].

Values are freely selected, containing beliefs or behaviors about the meaning of a person, object, idea, or action. Value is crucial because it affects decisions and actions. The linked value of compliance in taking the drug will increase the value of the device to a priority. Berman (2014) mentioned that the device value is a small group of values embraced by individuals. Individuals regulate their value devices along the continuum, ranging from the most important to the least important, forming a value system. The value system is the foundation of the path of life, gives direction in life, and forms the basis of behavior, especially behaviors based on decisions or choices[11]. TB sufferers who are undergoing treatment have moderate stress due to taking the drug for a long period[12].

Factor reinforcing

Family support is one of the factors affecting medication compliance. Family support includes instrumental, informational, appraisal, emotional support. The family plays a role as a supervisor to take medication and reduce stigma in family and society[5,13]. Family support includes the patient's motivation to undergo treatment, to be a medical supervisor and provide support in accessing health care to obtain anti-TB medications. Caring for TB sufferers is a stressor for TB caregiver at home. Caregiver TB not only acts as a drug-taking supervisor. Caregiver TB should be able to manage stress while caring for TB sufferers to avoid contracting easily[14]. Stress condition if not immediately resolved will increase cortisol levels to suppress immune system caregiver TB and easy to get displaced[14,15].

The support of healthcare officers (physicians and nurses) is an important factor in treatment of tuberculosis. Activities undertaken by the health Officer include Health promotion (counseling related to prevention of infection), curative (treatment process, side effects of the drug, and taking medication until complete)[7,16]. The challenge for health workers is how patients and families will undergo complete treatment, including attitudes (friendliness, empathy, and attention).

Factor enabling

Enabling factors, such as access to services or support, which can facilitate the adoption of a particular behavior)[5], type of facility, type of providers at first visit, number of visits, number of providers consulted before reaching a TB diagnosis and expenses plus travel time were assessed[17]. Health facilities that are available in Puskesmas Surabaya is very adequate, among others, the availability of drug flow, health promotion brochure, comfortable waiting room, and a clean toilet. It is also a factor that affects patients to come remediation[18]. As a form of support to the TB program, the government of Indonesia has secured all TB patient financing through the Social Security Administering Agency (BPJS) since 2014[19,20].

Conclusion

In conclusion, the determinants of incompliance medication people with Tb include predisposing factors (knowledge, attitudes, beliefs, trust and values); reinforcing factors (family and healthcare personnel support); and enabling factors (healthcare facility and environment). Tackling incompliance medication on Tb should involve private sector, family sector, society/healthcare sector and government sector.

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