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Determinants of Health Care-Seeking Behavior Among Pulmonary Tuberculosis Patients in Pontianak City, West Kalimantan, Indonesia

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***Abstract*— The case finding of pulmonary TB and health care-seeking become a significant public health concern. Health care-seeking delay is the most important negative risk factor for the spread of TB. This study aims to identify the determinants of health care-seeking behaviour in pulmonary TB patients in Perumnas II Health Center, Pontianak City. The research method used in the study was cross sectional design, and a total of 42 pulmonary TB patients was taken. The results showed that 57.10% had delayed health care-seeking. Perceptions of illness, family support, and mass media exposure were significantly associated with the delay in health care-seeking behaviour. Unrelated variables were age, gender, education level, occupation, income, and access to health services. It is urgent to do comprehensive targeted intervention to overcome care-seeking delay.**

Keywords: pulmonary TB, health care-seeking, patient

I. INTRODUCTION

Tuberculosis (TB) becomes a global concern. WHO reported TB as a serious health problem in the world. It caused 1.5 million deaths in 2014 with approximately 9.6 million new TB cases [1]. Morbidity and mortality rates of TB are over 81% in developing countries [2]. This was mainly because of the high HIV prevalence [3], the emergence of multidrug resistance (MDR) TB, low case detection rates, social inequalities, and ineffective TB control efforts [2,4].

Asian countries with the highest number of TB sufferers include India, Indonesia and China, with 23%, 10% and 10% respectively of all sufferers in the world. The prevalence of people diagnosed with TB by health workers in 2007 and 2013 was not significantly different (0.4%) in Indonesia [5]. West Kalimantan is one of provinces with a high prevalence of TB cases in Indonesia. Data showed that the Case Detection Rate for pulmonary TB in 2013-2015 was 55.46%, 73.72% and 69.66% respectively, and was still below the global target (70%) [6]. The case finding of pulmonary TB is one of the important control strategies to control the spread of TB and its resistance of drug.

Suspected TB sufferer screening has a very important role in overcoming TB disease. The pattern of seeking treatment is needed to be considered. There are variations in the pattern of seeking treatment for suspected TB sufferers [7]. Moreover, many previous studies found that old age, walking distance to public facilities, urban residence [8], occupation, having a history of haemoptysis, perceived health status (perceived wellness) and having a previous history of TB treatment [9], knowledge and perception of TB patients regarding TB and health services for TB [10] showed statistically significance relationship with health seeking treatment.

The delay in health seeking treatment is also significant. Some studies reveal that patient delay health care seeking for 25 to 120 days [11]. The delay health seeking behaviour of TB patients may lead to more serious outcomes, such as Multidrug Resistance (MDR) and Extensively Drug Resistant (XDR) forms, the spread of disease, etc. Efforts to curb the Tuberculosis epidemic focus on minimizing the delay of seeking medical diagnosis of the disease. Furthermore, it is for the fact that TB transmission occurs between the onset of cough and the initiation of treatment. This delay of health care-seeking is critical in mitigating disease transmission of TB epidemic.

Preliminary study showed that the first treatments taken when experiencing cough symptoms for more than 2 weeks were having self-medication and some of them bought over-the-counter medicines at the pharmacy.

Many factors contributed to the condition, such as the minimum financial costs and the poor socio economic background of the patients. Those factors may lead to the delay in treatment. The study aims to describe the determinants of health care-seeking among pulmonary TB patients in Pontianak Health Center, West Kalimantan.

II. MATERIALS AND METHODS

A cross-sectional study was conducted in the working area of Perumnas II Health Center, Pontianak City West Kalimantan from September to November of 2017. The total population in this study was 47 TB patients who were recorded in the Health Center. Purposive sampling was used. The number of samples was 42 people. The inclusion criteria were having pulmonary TB disease or ever having a relapse, and were aged16-65 years.

The data were collected by questionnaire with Malay language. Malay is the local language in Pontianak City and most of people speak the language. Interview technique was used. The questions of interview were regarding the patients' personal information (e.g. marital status, education, socio-economic status, age, gender). It also explored the emotional impact of having TB, the perceived quality of care received in the health center and details about case finding and case holding. Perceived causes of tuberculosis, family support, TB information exposure were also explored.

All data derived from the questionnaires were processed using the computer software package. Data analysis technique used was the chi-square statistical test. Before the study was conducted, we used all procedures that were appropriate with institutional research ethics committee.

III. RESULTS

A. Characteristics of respondents

Of 42 respondents, almost 69.0% were over 30 years old and 61.9% were male (Table I). Most of the respondents had low formal education (52.4%) and negative perception of illness (64.3%).

TABLE 1. CHARACTERISTICS OF THE RESPONDENT (N=42)

Variable	Total n (%)
Age (years)	
≤ 30	13 (31.0)
> 30	29 (69.0)
Gender	
Female	16 (38.1)
Male	26 (61.9)
Education	
Low	22 (52.4)
High	20 (47.6)
Occupation status	
Yes	27 (64.3)
No	15 (35.7)
Perception of illness	
Negative	27 (64.3)
positive	15 (35.7)
Family support	
Negative	18 (42.9)
Positive	24 (57.1)
Access to health facility	
Far	8 (19.0)
Near	34 (81.0)
Mass media exposure	
No	16 (38.1)
Yes	26 (61.9)
Health-seeking behaviour	
Delayed	24 (57.1)
Not Delayed	18 (42.9)

Also, 34 (81.0%) of them lived near the health facility; 26 (61.9) got information from mass media and 24 (57.1%) patients had positive family support (Table 1).

TABLE II. FIRST ACTION TAKEN BY PULMONARY TUBERCULOSIS PATIENTS

Action taken	**Total n (%)**
Buying drugs without prescription	8 (19.0)
Having self-treatment with safe home remedies (tea, honey, etc.)	11 (26.2)
Visiting health center	18 (42.9)
No action taken	5 (11.9)

This study found that most of the respondents (42.9%) visited the health center first, 26.2% got self-treatment, almost 19.0% got drugs without perception, and 11.9% did not take any action (Table II).

TABLE III. BIVARIATE ANALYSIS

Variable	Health Seeking Behaviour		OR with a Confidence Interval of 95%
	Not Delayed	Delayed	
Age ≤ 30 > 30	 4 (30.8) 14 (48.3)	 9 (53.8) 15 (51.7)	0.637 (0.260-1.565)
Gender Female Male	 6 (37.5) 12 (46.2)	 10 (62.5) 14 (53.8)	1.231 (0.578-2.623)
Education High low	 10 (45.5) 8 (40.0)	 12 (54.5) 12 (60.0)	1.136 (0.561-2.301)
Occupation status Employed Unemployed	 15 (55.6) 3 (20.0)	 12 (44.4) 12 (80.0)	2.778 (0.956-8.073)
Perception of illness Positive Negative	 10 (66.7) 8 (29.6)	 5 (33.3) 19 (70.4)	2.250 (1.137-4.453)*
Access to health facility Near Far	 16 (47.1) 2 (25.0)	 18 (52.9) 6 (75.0)	1.882 (0.538-6.584)
Family support Positive Negative	 15 (62.5) 3 (16.7)	 9 (37.5) 15 (83.3)	3.750 (1.275-11.026)*
Mass media exposure Yes No	 15 (57.7) 3 (18.8)	 11 (42.3) 13 (81.3)	3.077 (1.054-8.987)*

* p *value* < 0.05 (significant)

In the bivariate analysis, perception of illness (positive), family support and mass media exposure showed statistically significant relationship with immediate health-seeking behaviour among TB patients. Perception of illness was significantly associated with health-seeking behaviour. Pulmonary tuberculosis patients who had a negative perception of illness were more likely to delay health seeking-behaviour than those with positive perception of illness (OR (95% CI) 2.25 (1.137-4.453)). Family support was also significantly associated with respondents who had negative support. They were more likely to delay health-seeking behaviour than those with positive family support (OR (95% CI) 3.75 (1.275-11.026)). Mass media exposure

was also among significant factors as respondent who were not exposed to mass media were more likely to report that they had delayed seeking-behaviour than respondents who were exposed to mass media (OR (95%CI) 3.077 (1.054-8.987)) (Table 3).

IV. DISCUSSION

Indonesia as one of the developing countries in the world where the new TB case finding rate is still lower than that of WHO. Most of the population lives in rural areas. This condition may lead to an incomplete TB Diagnosis. The health-seeking behaviour focusing on pulmonary tuberculosis suspected patients could be very important to design the behaviour modification appropriately. The result of this research revealed that almost 57.1% had delayed health-seeking behaviour. They did not visited a health care center immediately. This may imply that they did not seriously consider their disease symptoms as health problems. It may imply that they had used other treatments, such as self-treatment in their home or buying drugs without prescription. The number in this finding is higher than that in a study conducted in Northwest Ethiopia [9, 12].

Our study found that perception of illness was significantly associated with health-care seeking. People who got sick but did not feel any extraordinary pain would not make any effort to treat the disease. Participants' perceptions about their perceived condition were according to the state of the pain they felt and their opinion on the immediate need to get health services when they felt sick. Participants with positive perceptions of illness were more likely not to delay their health-care seeking than those with negative perceptions. Perception of illness is an important variable of medical study, as this generally affects health-care seeking behaviour [9, 10, 13, 14, 15]. Negative perception of the illness (Tuberculosis) since in the populations was lower and generally wrong. Most of the participants felt that the symptoms, such as coughing, were of a mild disease. As a result, they did not visit the health center and tended to delay the health-seeking behaviour. These findings are consistent with other studies [16, 17, 18].

Moreover, our study found that family support was significantly associated with health-care seeking behaviour. Consistent with previous studies [19, 20, 21, 22], family support was the patients' motivation to persist in health-seeking behaviour. Financial support from the family is one of the forms of family support that influence health center visit behaviour. If this kind of support is not available, delayed health-care seeking may happen.

Other studies reveal that the role of family members are as advisers for the patients. Besides, they can also be educators regarding health and patients' health managers [23]. Family involvement becomes the component that is crucial in health-care seeking behaviour.

Mass media exposure also had a significant contribution in health-care seeking behaviour. Most participants had a lack of knowledge about TB, including about the symptoms and treatment of TB. One of the factors that influence their knowledge was mass media exposure regarding TB. The participants tended to seek information from mass media, but they often got a little information about it. Then, they tended to be doubtful in regards to health-seeking behaviour. Mass media are used as health communication media in recent years [24, 25]. It could be used to disseminate potential information regarding health. A lot of information were disseminated and obtained from mass media [26]. Evidence based on a study reveals that the health information can influence a person in health-seeking behaviour [27].

A critical factor to control the TB disease is early detection of TB and its treatments. Based on the research findings, an effective strategy is needed to increase the family support, positive perception about the illness, and information about TB by mass media. Our study had several limitations, such as the retrospective study design which allowed a recall bias on the collected information. Another limitation was the fact that it was conducted in the urban areas of West Kalimantan (which had a different under-resourced setting from other districts in Indonesia or other countries). Thus, our findings may not be generalizable to all settings with different characteristics and districts. We also did not report on patients' knowledge, stigma, and other unexpected factors that might contribute on TB delayed health-care seeking behaviour. Several studies had also shown the factors significantly associated with delayed health-seeking behaviour [28, 29]. The respondents of this research were registered at the local health center in Pontianak City. Whereas, the TB patients who had not been registered yet could have longer delay time in health-care seeking behaviour. This condition might also lead to a bias in this research.

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