

TUBERCULOSIS CASE FINDING PRACTICE: THE INTENTION OF CADRES

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Abstract

Tuberculosis (TB) is a difficult health problem to overcome. Active case finding is an important step in managing this infectious disease. However, the prevalence of TB case finding among cadres at the community level is low because of the stigma attached to TB, difficulty in geographical coverage, low public awareness, and social economic barriers. In addition, the empowerment and intention of cadres to perform community-based TB case finding are not optimal yet. This cross-sectional study aimed to determine the intention of TB case finding among 162 public health cadres at one district. Convenient sampling technique was employed in this study. Relationship analyses were performed using Chi-Square test. Results suggested that three factors, namely, attitude, subjective norm, and perceived behavior control influenced the intention to practice TB case finding among cadres. Public health care providers must encourage cadres to practice active TB case finding and understand the benefits and burdens encountered by cadres during TB case finding.

Keywords: attitude, intention, perceived behavior control, public health cadre, subjective norm, Tuberculosis case finding

Abstrak

Praktik Penemuan Kasus Tuberkulosis: Niat Kader. Tuberkulosis (TB) masih menjadi masalah kesehatan yang sulit diatasi. Penemuan kasus TB secara aktif merupakan langkah awal yang menjadi kunci keberhasilan dalam penanganan kasus TB, namun angka penemuan kasus TB masih rendah. Kader belum dapat melakukan pendeteksian dini kasus TB secara optimal. Selain itu sebagai penemu kasus TB di masyarakat, kader memiliki berbagai tantangan dalam upaya menemukan kasus TB, salah satunya adalah niat untuk menemukan kasus TB mengingat banyak stigma yang muncul terkait penyakit TB, keadaan geografi yang sulit dijangkau, rendahnya kesadaran masyarakat, dan kendala biaya. Tujuan dari penelitian ini adalah untuk mengetahui intensi atau niat kader dalam menemukan kasus TB. Penelitian ini menggunakan desain cross sectional dengan melibatkan 162 kader kesehatan di sebuah kecamatan. Metode pengambilan sampel menggunakan convenient sampling. Analisa hubungan menggunakan uji statistik Chi Square. Hasil penelitian menunjukkan ketiga faktor yaitu sikap, norma subjektif, dan kendali perilaku yang dirasakan memiliki hubungan dengan intensi dalam menemukan kasus TB. Maka dapat disimpulkan, dukungan tenaga kesehatan sangat penting dalam meningkatkan praktik penemuan kasus TB dan penting untuk memperhatikan manfaat dan tantangan yang ditemui oleh kader dalam menemukan kasus TB.

Kata Kunci: kader kesehatan, kontrol kendali yang dirasakan, niat, norma subjektif, penemuan kasus Tuberkulosis, sikap

Introduction

Tuberculosis (TB), caused by *Mycobacterium tuberculosis*, is a public health problem worldwide. TB attacks the lungs but can also invade other organs, such as the meninges, kidney, bone, intestine, pleura, bladder, urinary tract, and lymph nodes (World Health Organization, 2017).

Indonesia ranked two in annual TB incidence, with a case number of 1,020,000 and an incidence rate of 391 per 100,000 population (Ministry of Health Republic of Indonesia, 2018).

The number of new and relapse TB cases was notified in a year per 100,000 populations. The number of TB cases is detected by the national

TB control programmer. Moreover, “notification” is defined as the process in which a patient is diagnosed and reported in the national surveillance system. The World Health Organization (2017) reported a total case notification number of 447,106 per 264 million population in Indonesia, indicating that 0.17% of the population were diagnosed with TB. National TB programs should ensure meaningful engagement with affected population (World Health Organization, 2018).

Considering that increasing community participation to TB control is essential, the government of East Nusa Tenggara, Indonesia determined the target case notification rate to be 70%. However, the Department of Health East Nusa Tenggara in 2017 reported that the case notification rate was 56.74 per 100,000 population and the incidence rate of TB was 130.13 per 100,000 population (Lembata Health Profile, 2017).

TB is a health prevention priority of the provincial government of East Nusa Tenggara. The local government is conducting TB case finding programs to eliminate TB by 2023. The TB case finding programs named by “Good Pagi” cover TB case finding through door-to-door home visits and screening of TB in the morning. These activities are participated by health workers and volunteers at the community.

Cadre is a volunteer person from the community as a form of community participation. Cadre is also defined as a frontline health volunteer who provides information and performs health-related tasks (Mundeva, Snyder, Ngilangwa, & Kaida, 2018). Various national committees and expert groups have recommended the establishment of a cadre (Kumar, Bothra, & Mairembam, 2016). After receiving basic training of disease prevention from public health care provider, cadres have the responsibility to promote healthy behavior at their community. According to the Department of Health Republic of Indonesia (2009), cadres assist in public health program through TB case finding at their

community. A previous study stated that active case finding is a key strategy to find TB cases in burden countries (Prasad, Satyanarayana, & Chadha, 2016).

However, engaging the community in TB detection has several challenges, including inadequate public knowledge regarding TB surveillance, insufficient ability to diagnose TB, limited geographical coverage, social economic barriers, low public awareness, and high stigma among healthcare workers and in communities (Ministry of Health Republic of Indonesia, 2018). In addition, a previous study pointed out that the barriers could be derived from internal factors of individual health workers; although individual health workers have received optimal education and training, their intention to perform TB case finding is not optimal (Evenblij, Verbon, & Van Leth, 2016). In supporting the duty of cadres to implement TB case finding, enhancing the intention of cadres to find TB cases at their community is important. Studies usually employed the Theory of Planned Behavior to examine the intention of a certain behavior. This theory suggests that the principal determinant of a behavior is intention (Fishbein & Ajzen, 2010). Intention is predicted by three main constructs: attitude, subjective norm, and perceived behavior control. “Attitude” is defined by behavioral beliefs that determine if people will perform a behavior, whereas “subjective norm” is defined by the perception of a significant social referent if a behavior is appropriate or not. Perceived behavior control is defined by the situation or condition that facilitates or inhibits a behavior (Fishbein & Ajzen, 2010). Previous studies in Indonesia showed that attitude, subjective norm, and perceived behavior control influence the intention of TB case finding among cadres (Sumartini, 2014; Aderita & Chotimah, 2018).

These phenomena indicate that the fundamental of ensuring all TB patients by inventory TB case finding as early as possible is the first step to reduce transmission to others. TB case detection rate can be improved by the public

and all health workers. Efforts sourced from the community generally strengthen health personnel, allowing the community to be involved in increasing TB case detection. For instance, cadres should be considered as partners and health volunteers at the community. As a voluntary duty in TB case finding at the community, the intention to practice TB case finding needs to be strengthened. Therefore, this study aimed to determine the intention to practice TB case finding among cadres at one district in East Nusa Tenggara, Indonesia.

Methods

This cross-sectional study (Polit & Beck, 2012) involved cadres who were actively on duty at their community in the area under jurisdiction of the Public Health Center at one district in East Nusa Tenggara, Indonesia. The potential samples were calculated by using Krejcie table from 283 populations of cadres. Therefore, the total samples in this study consisted of 162 participants.

The non-probability sampling technique with convenient sampling was employed in this study. Participants were cadres who were actively on duty at their community in the area under jurisdiction of the Public Health Center. The inclusion criteria were cadres who practiced community programs actively in their area of duty.

Data were collected by using the Intention of TB Case Finding Questionnaire developed based on Theory of Planned Behavior (Aderita & Chotimah, 2018). In the present study, the Intention of TB Case Finding Questionnaire was modified by selecting only the direct factors of intention, attitude, subjective norm, and perceived behavior control. The questionnaire of intention to practice TB case finding included seven items (4-point Likert Scale), that of attitude to practice TB case finding included nine items (4-point Likert Scale), that of subjective norm included six items (4-point Likert Scale), and that of perceived behavior control include-

ed nine items (2-point Gutmann scale). The Cronbach's alpha coefficients in the subscales of intention, attitude, subjective norm, and perceived behavior control were 0.719, 0.814, 0.652, and 0.962, respectively.

Data were collected on January 2019. Data were analyzed by using univariate and bivariate analyses. Descriptive statistics, including frequency and percentage distribution, were analyzed to describe the factors based on Theory of Planned Behavior consisting of intention, attitude, subjective norm, and perceived behavior control of TB case finding practice. The relationship analyses were used to find the relationship between independent variables (attitude, subjective norm, and perceived behavior control) and dependent variable (intention) by using Chi-Square test. Statistical significance was considered at $p \leq 0.05$.

Results

Descriptive Analysis of Factors Based on Theory of Planned Behavior. Descriptive analysis was used to describe the factors based on Theory of Planned Behavior that includes intention, attitude, subjective norm, and perceived behavior control of TB case finding practice as shown in Table 1.

On the scale 1–4 for all subscales and item, the participants rated their intention to practice TB case finding at the average level of percentage. Results showed that 54.9% reported that they were extremely likely to practice TB case finding and 45.1% reported that they were weakly likely to practice TB case finding. The majority of participants rated their scores at positive attitude to TB case finding, which was 64.8%. In terms of the second variable subjective norm, the majority of the participants showed that the most important people (husband, family, and health workers) should agree to support the practice of TB case finding (72.8%). In addition, the participants showed that they had a sense of perceived behavior control in practicing TB case finding on average level. For

each item, 53.7% were extremely able to control situations that inhibit to practice TB case finding and 46.3% were weakly able to control situations that inhibit to practice TB case finding.

Relationship Analysis of Factors Based on TPB. The relationship of intention to practice

TB case finding with attitude, subjective norm, and perceived behavior control was analyzed using Chi-Square test. A significant level was set at $p \leq 0.05$. As shown in Table 2, results showed that the attitude of public health cadres to find TB cases had a significant relationship with intention to practice TB case finding at their area of duty ($p= 0.000$).

Table 1. Frequency and Percentage of Factors Affecting the Practice of TB Case Finding on January 2019 at One District in East Nusa Tenggara (N= 162)

Construction of Theory of Planned Behavior	N	%
Intention		
Weakly likely	73	45.1
Extremely likely	89	54.9
Attitude		
Negative	57	35.2
Positive	105	64.8
Subjective Norm		
Weakly agree	44	27.2
Extremely agree	118	72.8
Perceived Behavior Control		
Weakly able to control	75	46.3
Extremely able to control	87	53.7

Table 2. Relationship of Attitude with Intention to Practice TB Case Finding on January 2019 at One District in East Nusa Tenggara (N= 162)

Attitude	Intention of TB Case Finding				Total		p
	Weakly Likely		Extremely Likely		N	%	
	N	%	N	%			
Negative	39	24.1	18	11.1	57	35.2	0.000
Positive	34	21.0	71	43.8	105	64.8	
Total					162	100	

Table 3. Relationship of Subjective Norm with Intention to Practice TB Case Finding on January 2019 at One District in East Nusa Tenggara (N= 162)

Subjective norm	Intention of TB Case Finding				Total		p
	Weakly Likely		Extremely Likely		N	%	
	N	%	N	%			
Weakly agree	32	19.8	12	7.4	44	27.2	0.000
Extremely agree	41	25.3	77	47.5	118	72.8	
Total					162	100	

Table 4. Relationship of Perceived Behavior Control with Intention to Practice TB Case Finding on January 2019 at One District in East Nusa Tenggara (N = 162)

Perceived behavior control	Intention of TB Case Finding				Total		p
	Weakly Likely		Extremely Likely		N	%	
	N	%	N	%			
Weakly able to control	38	23.5	22	13.5	60	37.0	0.000
Extremely able to control	35	21.6	67	41.4	102	63.0	
Total					162	100	

As shown in Table 3, the subjective norm that includes support of important people (husband, their family, health workers, and their friend) as cadres had a significant relationship with the intention to practice TB case finding ($p=0.000$).

As depicted in Table 4, the perceived behavior control described by controlling situations that could inhibit cadres to practice TB case finding had a significant relationship with the intention to practice TB case finding ($p=0.000$).

Discussion

The descriptive analysis of the present study showed that the majority of cadres had positive attitude to practice TB case finding and received positive support from their significant others to practice TB case finding. Furthermore, the majority of cadres were able to control their situation to practice TB case finding. However, the significant findings of this study suggested that the three factors based on Theory of Planned Behavior, including attitude, subjective norm, and perceived behavior control, were significant with intention to practice TB case finding among cadres.

This study confirmed that attitude, subjective norm, and perceived behavior control had a significant relationship with the intention to practice TB case finding. In this present study, the findings were consistent with those of other studies in Indonesia, which reported that attitude, subjective norm, and perceived behavior control show a significant relationship

with the intention to practice TB case finding (Sumartini, 2014; Aderita & Chotimah, 2018).

The attitude to practice TB case finding was related to their intention significantly. Cadres are maintainers of the community and participate voluntarily. Their attitude is determined by their behavioral beliefs that performing a behavior to maintain health issues at their area leads to certain outcomes. A previous study reported that TB control programs cannot be deemed successful if all the areas did not show adequate attitude (Paul et al., 2015). The adequate attitude of cadres is based on their sense of belonging about their hometown.

The present study suggested that the subjective norm had a relationship with the intention to practice TB case finding. Cadres are demanding positive support as volunteers from their significant others. Putri (2017) found that family, partner, and health care providers influence health cadres to perform their duty at the community. Being a volunteer was not easy. Volunteers should have the responsibility to manage health issues in their community. They have another duty not only as a cadre but also as a housewife who manages her family. Thus, family support is important to enhance the performance of cadres. Furthermore, support from a partner who is a fellow cadre to practice TB case finding can strengthen TB programs (Khanal et al., 2017). Psychological support from their family and fellow cadres is important. In addition, a previous study mentioned that supportive supervision from public health care providers could strengthen the performance of cadres

in ways to perform their tasks (Kok et al., 2017). Health care providers should give adequate training to improve the performance and willingness of cadres to carry out their tasks.

Furthermore, the ability to control the circumstance to perform TB case finding was perceived by cadres. They had a sense of bad experience to find TB patients because some of them were scared about this infectious disease. This stigma can impact health-seeking practice and illness management (Craig et al., 2017). Cadres without confidence to find TB patients would not have a strong intention to practice TB case finding. In addition, evidence shows that cadres could help address various health problems, including TB case finding, because some areas have difficulty in geographical coverage, low public awareness, lack of health facilities, and social economic barriers. Although health volunteers face some obstacles, the community expects that cadres could control situations that could inhibit them from finding TB cases. As previous study suggested that cadres should improve their knowledge and skills to control situations that hinder finding TB cases (Rachlis et al., 2016). Health care providers should remove barriers to control situations and increase the confidentiality of cadres to practice TB case finding. Moreover, Chaisson et al. (2015) stated that monitoring program and feedback from health care providers could increase health care provider awareness about the cadres' consequences of current practice, social norm, and perceived ability to perform the desired behavior. Thus, monitoring program and feedback are needed to improve the knowledge and skills that affect cadres' intention to follow the program.

As a general rule (Fishbein & Ajzen, 2010), the more favorable the attitude and subjective norm, and the greater perceived behavior control, the stronger should be the person's intention to perform the behavior. However, the relative importance of these three factors of intention is expected to vary in other behaviors and populations. In summary, the stronger the

intention, the more likely to perform the behavior. Furthermore, providing support to cadres by educating them about hard-to-reach areas can increase their level of willingness to serve the community (Rawal et al., 2016). In this present study, cadres had variation of skills and abilities based on their experience as health volunteers at the community, presence of environmental barriers, and obstacle from significant others to perform their duty. Cadres may also encounter difficult situations in TB case finding. The ability to solve the problem and the willingness in TB case finding should be supported.

Conclusions

Health services in a district are provided by cadres at those community and health care provider staff, including nurse, midwifery, and doctor. Cadres are volunteers who assist a small part duty of health care providers in a health promotion program. Cadres act as the front liners in TB case finding. This study suggests that the three factors based on Theory of Planned Behavior could determine the intention of TB case finding. In consideration that TB is a difficult health problem to overcome, active case finding is the first step to overcome this health problem. Public health care providers must encourage cadres to practice TB case finding actively and focus on the benefits and burdens that they may encounter during TB case finding. Moreover, family and health care providers should support cadres to practice active TB case finding so they could have a positive attitude toward this activity. Globally, the public health care provider should focus on the benefits and burdens that cadres may encounter during TB case finding.

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