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The Factors that Related to the Success of Tuberculosis Cadres in Tuberculosis Case Finding

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ABSTRACT

Tuberculosis (TB) case finding as early as possible can prevent transmission and death of TB patient. Health cadres are one form of community participation in the health sector. This study aimed to determine the factors associated with the success of cadres in TB case finding. This research used a descriptive-analytic design with a cross-sectional approach. The sample used was 30 TB cadres. Independent variables were predisposing factors: knowledge and attitudes, enabling factors: counselling, training, and availability of health facilities, reinforcing factors: community benefits and support, and the dependent variable was TB case finding. The instrument used a questionnaire and analysed using a logistic regression test. There is a relationship between knowledge and TB case finding ($p = 0.027$), counselling ($p = 0.001$), and training ($p = 0.001$), availability of health facilities ($p = 0.004$), rewards ($p = 0.001$), and community support ($p = 0.002$). No relationship was found between attitude and case finding ($p = 0.400$). The majority of knowledge cadres have immense knowledge that the role of cadres in case finding can increase the success of TB programs and increase community knowledge for independence in TB control.

Keywords: cadres, case finding, factors, knowledge, tuberculosis

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INTRODUCTION

Tuberculosis (TB) is an infectious disease that still becomes a serious public health problem. It also one of the leading causes of death so that it is necessary to carry out sustainable TB control (1-3). The World Health Organization (WHO) states that TB is a global emergency for humanity (4). The incidences of TB in the world in 2015, there were estimated to be 10.4 million new (incident) TB cases worldwide. Six countries accounted for 60% of new cases, India, Indonesia, China, Nigeria, Pakistan, and South Africa (5).

The low TB case finding rate can be caused by various factors, including the surveillance system that is not yet strong, the ability to diagnose TB disease, which is lacking along with the lack of access to health services (6). The community and all health workers can increase the TB case findings. In 2005, the Global Stop TB Partnership Strategy Directly Observed Treatment Short course (DOTS) was expanded to become the "Stop TB Strategy" which is to achieve, optimize, and maintain the quality of DOTS. It also responds to the Tuberculosis problem human immunodeficiency virus (TB-HIV), Multi Drug-Resistant Tuberculosis (MDR-TB), and other challenges; contribute to the strengthening of the health system. This program involves all providers of health services, both government and private; empower patients and the community; carry out and develop research in TB topic (7-10). Efforts sourced from the community generally strengthen health workers so

that the community can also be involved in increasing TB case finding, one of which is through health cadres, which must be considered as partners or working partners. One obstacle in TB case finding is the lack of active cadres in the selection of suspected cases so that TB case finding is still low. That background underlies the interest of researchers to determine the factors associated with cadres' success in TB case finding [1].

Materials and Methods

This research was a descriptive-analytic study with a cross-sectional approach. The population in this study were all TB cadres. The sampling technique in this study used probability sampling (simple random sampling) with 30 respondents [2]. The independent variables in this study were factors related to the success of TB cadres, namely, knowledge, attitudes, counselling, and training, availability of facilities, rewards, and community support. The dependent variable in this study was TB case finding. The instrument used was the knowledge questionnaire (11), attitude questionnaire (12), counseling questionnaires, training, availability of health facilities, reward questionnaires, community support, and case finding questionnaires (12,13). Data analysis used a logistic regression test.

Table 1. Distribution of tables based on respondent demographic data

Variable	n	%
Age		
26 - 35 years old	14	46.7
36 - 45 years old	13	43.3
46 - 55 years	3	10.0
Total	30	100
Gender		
Male	13	43.3
Female	17	56.7

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Total	30	100
Education		
Graduated from elementary school	7	23.3
Graduated from middle school	15	50.0
Graduated from high school	8	26.7
Total	30	100
Marital status		
Married	29	96.7
Single	1	3.3
Total	30	100
Occupation		
Housewife (IRT)	17	56.7
Farmer	13	43.3
Total	30	100.0

Result

The results of the age study showed that TB cadres varied in age from 26-55 years, the majority of respondents based on the female sex. The most frequent category of respondent's

educational status was junior high school. Based on the marital status category, it shows that the majority of respondents are married. Whereas, based on employment, it was shown that the occupation of the respondents was 56.7% as housewives, and 43.3% worked as farmers (Table 1).

Table 2. Distribution of respondents based on knowledge, attitudes, counselling, and training, availability of health facilities, rewards and community support

Variable	Category	Frequency	
		n	%
Knowledge	High	24	80.0
	Low	6	20.0
Attitude	Positive	23	76.6
	Negative	7	23.7
Counselling	Often	23	76.7
	Rarely	7	23.3
Training	Once	19	63.3
	Never	11	36.7
Availability of health facilities	With health services	20	66.7
	No health services	10	33.3
Rewards	Incentives and prizes	6	20.0
	Incentives	13	43.3
	No rewards	11	36.7
Community Support	All social support	9	30.0
	Information and emotional support	15	50.0
	No support	6	20.0
Case finding	Yes	16	53.3
	No	14	46.7
Total		30	100

From table 2, it can be seen that the majority of respondents have high knowledge. High cadre knowledge about TB will improve cadres' ability to find suspected TB cases and convey to the public the correct information about TB. At the same time, attitudes can be seen that most respondents have a positive attitude. A positive cadre attitude about TB will increase the willingness of cadres in the discovery of suspected TB cases and increase community independence in TB control. Respondents who received counselling more frequently in the past year were 76.7%. Cadres who often get counselling will get more information about TB, and other health education will increase knowledge and influence the success of TB suspect's case finding. Respondents who stated

that they had received training were more than those who had never received training, while respondents who stated that there were health facilities was 66.7%. Table 2 also shows that some respondents received rewards and received support from the community in TB case finding, and not all respondents managed to find TB cases.

Table 3. Distribution of relationships of predisposing, enabling, and reinforcing factors with TB case finding

Variable	Regression	
	Regression coefficient	p-value
Predisposing factors		
Knowledge	19.612	0.027
Attitude	-0.502	.400
Enabling Factor		
Counseling	-19.306	.001
Training	18.763	.001
Availability of Health Facilities	21.257	0.004
Strengthening Factor		
Rewards	-40.712	0.001
Community Support	-59.389	0.002

In table 3, the statistical test results show that knowledge in case finding has a significant relationship with $p = 0.027$. While the results of attitude analysis obtained $p = 0.400$, which means there is no meaningful relationship between attitude and case finding. Statistical test results show that counseling with case finding has a significant relationship with the value of $p = 0.001$. The results of statistical tests show that there is a significant relationship between training and success in finding TB cases, which is indicated by the value of $p = 0.000$. While the statistical test results of the availability of health facilities with cadres' success in case finding obtained $p\text{-value} = 0.001$, there is a significant relationship between health facilities and TB case finding. Analysis of the statistical test results obtained $p\text{-value} = 0.001$, which means there is a significant relationship between reward and case finding. While the value obtained from the community support statistical test is $p = 0.002$, this value means that there is a significant relationship between community support and the success of TB case finding.

Discussion

The results showed a relationship between knowledge and the success of cadres in TB case finding. Maximum performance results can be influenced by knowledge (14). Previous studies have also revealed that the relationship between knowledge, attitudes, and motivation of cadres states that there is a statistically significant relationship between knowledge, attitude, and motivation with the activities of health cadres in TB case-control in Buleleng Regency (15). High cadre knowledge enables cadres to actively carry out their activities in handling TB cases 18 times more than if cadre knowledge is low. Notoatmodjo revealed that knowledge is the result of knowing, and this happens after people have sensed a certain object. Most knowledge or cognitive is a very important domain in shaping one's actions (16). Based on the facts and theories explained above, the authors argue that cadre knowledge can influence cadres' success in TB case finding [3].

The results of this study indicate that there is no significant relationship between attitude and success of cadres in TB case finding. This study's results are in line with previous research with respondents who have a negative attitude about preventing TB infectious diseases as much as 54.5% in Wringinom Gresik Health Center (17). This happens because

of several factors that influence attitudes. The factors include personal experience, emotional factors, family support factors, and age. Attitude is a factor that determines behavior because attitude is related to perception, personality, learning, and motivation. Rosenberg's theory states that attitude determines effect (feeling), cognition (thought process), and behavior of a person (18). Attitude is a combination of cognitive components, components of feelings, and components of action tendencies (19,20). Components of action tendencies are one's tendencies to behave both positively and negatively towards an object. A positive attitude tends to encourage someone to help or support an object. Negative attitudes tend to encourage someone to avoid even trying to harm an object. A positive attitude towards case finding tends to accept and know that. The negative attitudes tend to reject the effort to find TB cases. According to Azwar, in 2013, factors that influenced attitudes were personal experiences and the influence of those considered important, cultural influences, mass media, and educational institutions (21). In accordance with this study where several factors influence people's attitudes [4].

The results of this study stated that there was a significant relationship between counseling and the success of cadres in TB case finding. This can affect the level of knowledge of cadres about TB case finding. This study is in line with Nurman's research in 2017 that the possibility of cadres who often get counseling to be active is three times that of cadres who rarely get counseling (22). The results of this study are also in line with research Yohanik in 2012 that the chances of respondents who often get counselling are four times to be active compared to cadres who rarely get counselling and research there is a significant relationship between counselling with the activeness of cadres (13). Counseling is one form of health education that aims to change planned behavior in individuals, groups, and communities to be more independent in achieving healthy living goals. All type of health education are forms of community empowerment that can increase individual, group, and community knowledge (23).

There is a significant relationship between training and the success of cadres in TB case finding. The results of this study support Sumartini's research in 2018. It states that the training of health cadres relates to the participation of cadres in TB case finding in Cakranegara, West Lombok (24). Trisnawati researched the study, which also involved health

cadres in 2008, which examined the training of health cadres' capacity building in TB control. The study concluded that there was an increase in the knowledge of health cadres after the training so the health cadres could spread information and skills to TB patients, families, and communities (25). This study also states that there is a significant relationship between the availability of health facilities and the success of cadres in case finding. This study was in line with the research of Irtiani in 2009, the possibility of cadres who have health facilities 8 to be active than cadres who do not have health facilities (26).

The results of this study indicate that there is a significant relationship between rewards and the success of cadres in TB case finding. This is in line with previous research in 2012, which explains that there is a significant relationship between incentives/rewards and the activeness of cadres in the management of alert villages with the possibility of being twice as active as cadres who do not get rewards (13). This research is supported by the research of Setiawan & Mardhianti in 2013, which also states that there is a significant relationship between incentives and activist cadres. Cadres who have received incentives are twice as likely to be active than cadres who have never received incentives (27).

This study states that there is a relationship between community support and the success of cadres in finding meaningful cases. This research was in line with Yohanik in 2012, showing a meaningful relationship between community leaders' support and activist cadres. Opportunities for cadres who have the support of community leaders to be active are three times higher than those of cadres who do not have support (13). The possibility of cadres who get support from community leaders is three times more active than cadres who do not get support (27). Behavior, a person tends to need support from the surrounding community (28). Without community support, there will be an inconvenience for someone to behave. Based on the facts and theories explained above, the authors argue that the high level of community support, such as informational support, emotional support, instrumental support, and assessment support, will develop confidence in the individual who receives it. This will provide a positive assessment, encouragement, and appreciation that can affect cadres' strong motivation in case finding because cadres feel protected and more enthusiastic in participating in activities so that efforts to improve the degree of public health are increased.

CONCLUSION

There is a relationship between knowledge, counseling, training, availability of health facilities, rewards, and community support have a significant relationship with the success of cadres in TB case finding. While attitude variables do not have a significant relationship with the success of cadres in TB case finding, this shows the need for ongoing collaboration with local governments related to policies and community empowerment in controlling TB Program activities.

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