The Factors Determinant Influencing Case Detection Rate by Health Employee Public Health Centre in Sub Province Mimika

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ABSTRACT

Introduction: Tuberculosis is a disease of infection caused by Mycobacterium tuberculosis with high of risk infection. So, the preventive is to take the tuberculosis disease by health public centre with case detection rate, but still low the case detection rate in Mimika Regency.
Target: to knowing the factors affecting of performance health employee tuberculosis with case detection rate at public health center Mimika regency
Method: Analytic of observational with cross sectional study design. Research executed on 16 April until 18 June 2018 in Public health centre Mimika Regency with population is health employee of tuberculosis as much 30 people as sampling. Data approach used questionnaire and analysed by chi square test.
Result of research: The factors not affecting of case detection rate at Public Health Center Mimika Regency are age (*p-value* 0,101; RP = 2,545; CI95% (0,736– 8,805), studies (*p-value* 1,000; RP = 1,154; CI95% (0,514 – 2,590), gender (*p-value* 1,000; RP = 1,111; CI95% (0,551 – 2,239), long work (*p-value* 0,689; RP = 1,250; CI95% (0,633 – 2,468), training (*p-value* 0,072; RP = 2,294; CI95% (0,960 – 5,483), double job (*p-value*= 0,072; RP = 2,294; CI95% (0,960 – 5,483), knowledge (*p-value* = 0,086; RP = 1,971; CI95% (1,131 – 3,436), motivation (*p-value*= 0,-058; RP = 2,000; CI95% (1,076 – 3,717), attitude (*p-value* 0,136; RP = 1,905; CI95% (0,933 – 3,890) and supervisor (0,058 = RP = 2,000; CI95% (1,076 – 3,717). And then the factors affecting of case detection rate by health officer at Public Health Center Mimika Regency is supervisor ((*p-value* = 0,003; RP = 3,429; CI95% (1,429 – 8,227). The determinant factor of influencing case detection rate by health employee public health centre sub province mimika is supervisor.

Key Words: Health Employee, Case Detection Rate, Mimika

1. INTRODUCTION

Pulmonary tuberculosis (pulmonary TB) is an infectious disease caused by the bacterium Mycobacterium tuberculosis. Tuberculosis is still a world health problem especially in developing countries. The case of TB in the world is still increasing. The World Health Organization (WHO) report estimates that there are 9.4 million TB patients or 137 cases per 100,000 populations with a mortality rate of 1.3 million patients per year worldwide. Fifty-five percent of cases originated in Asia and 30% in Africa (WHO, 2016). WHO report 2016, CDR pulmonary TB in 2016 by 67%, there are 8.6 million people experiencing pulmonary TB and 1.3 million of them experiencing death (WHO, 2016). Based on the WHO report in Global Tuberculosis Report 2016, Indonesia ranks fifth largest in the world as a contributor to TB patients after India, China, Nigeria and Pakistan. From 2014 to 2017 CDR rates in Indonesia always rise and have reached the national target. CDR in 2013 as much as 72.8%, by 2014 by 73.1%, by 2015 by 78.3%, and by 2016 by 83.5%. CDR of pulmonary tuberculosis in 2017 slightly decreased compared to 2016, which was 82.4%. The number of smear positive cases found in 2017 was 202,301 cases. The rate of notification of smear positive cases in 2014

in Indonesia amounted to 70 per 100,000 populations, decreased compared to 2015 which amounted to 81 per 100,000 populations. Likewise with the notification of all cases of TB per 100,000 populations in 2016 amounted to 113 per 100,000 populations (Ministry of Health RI, 2016).

The prevalence of pulmonary TB in Papua Province in 2016 was 2,601 (63.6%) and in 2017 reached 2,569 (63.3%) and the rate of healing of positive BTA was 90.5%, increased by 0.3% compared to 2015 (90.2%). The number of people who did not recover in 2016 was 9.8% and in 2015 9.5% (Provincial Health Office, 2017). During the last five years, the CDR TB of Papua Province has not been able to achieve the national target. In 2012 that only amounted to 47.97%. For the next year shows an increase in CDR TBya in 2013 reached 48.15%, in 2014 amounted to 55.38%, and in the year 2015 reached 59.52%. However, 2016 shows that there is a decline in CDR TB in Papua Province from 2015 from 59.52% to 58.45%. In 2017, CDR TB increased by 58.46% (Provincial Health Office, 2017). One of the treatment strategies used in the prevention of Pulmonary TB is the discovery of new cases to be treated immediately. Case detection rate (CDR) is the proportion of new TB smear positive patients who were found and treated for the number of newly acquired positive TB patients in that area. National program targets in achieving the discovery of new patients with smear positive TB at least 70%. This TB disease as one of the target diseases to be lowered other than malaria and HIV / AIDS in Sustainable Development Goals (MDGs). Current TB control programs are carried out using the DOTS (Directly Observed Treatment Strategy) strategy recommended by WHO. The main focus of DOTS is the discovery and healing of patients, a priority given to infectious type TB patients. This strategy will decide the transmission of TB and thereby reduce the incidence of TB in the community (Kemenkes RI, 2014).

The low discovery of new cases will have an impact on the healing of new tuberculosis disease and the occurrence of germ-resistant resistance against some anti-tuberculosis or multi drug resistance drugs, so that pulmonary TB disease is very difficult to cure and cause high mortality (Ariani, 2015). This process will succeed if the fulfilment of advice and knowledge and attitudes of the officer baik. Menurut research conducted by Ratnasari (2015) mentioning that factors related to the performance of TB program Paruterhadap new case detection (Case detection rate) BTA (+) is the knowledge of officers, training of officers, officers' tasks, active TB suspect scoping and officer attitudes and unrelated factors are the level of education, tenure and motivation.

The working area of Mimika Regency Health Office consists of 23 puskesmas. The findings of cases of pulmonary tuberculosis cases in 2015 are as many as 346 people (32.48%), an increase of 295 cases when compared to 2014 (11.43%). Year 2016 Discovery of TB AFB positive tuberculosis patients as much as 288 people (23.88%) and in 2017 as many as 394 people (47.81%). In 2017, there are 2 puskesmas (Mapuru Jaya and Atuka) that have achieved national target of 70% and puskesmas that have not reached national target of 70%, Kokonao Health Center (37.5%), central market (54%), Ayuka 40%), Timika (57%), Timika Jaya (37%), Limau Asri (41%), Bintuka (33%), Kwamki (62%), Wania (31%) and Jileyale (27%). The results of initial observations and interviews conducted in 5 Puskesmas (Wakia, Potowayburu, Atuka, Kwamki, Agimuga) (5 TB program officers) Mimika District, said that the performance of pulmonary tuberculosis program manager has not been maximal. Another problem related to the case finding by health personnel in Puskesmas is the existence of duplicate duties and employee mutations in the P2 community health center. Under conditions of concurrent employment, in other words must be responsible for other

tasks, the Puskesmas staff feel to have a heavy workload and the program holder also said that there are people with pulmonary tuberculosis who refuse, officers must visit his home using his own means of transportation. In addition, if patients do not adhere to taking drugs, relapse, or drop out, also increase the workload of TB officials. Lack of motivation from leadership also greatly influences the performance of TB officers. Without the discovery of suspect, the pulmonary tuberculosis eradication program, from discovery to treatment will not succeed, so the process of discovery of suspected pulmonary tuberculosis is crucial to the success of the program. The purpose of this research is to know the determinant factor related to case detection rate coverage by puskesmas officer at puskesmas in Mimika district area.

2. MATERIALS AND METHODS

Analytical observational with cross sectional study design. The study was conducted on 16 April to 18 June 2018 at 10 affordable Puskesmas covering Jile Yale Health Center, Wania, Limau Asri, Kwamki, Timika, Ayuka, Timika Jaya, Bhintuka, Central Market and Kokonao totalling 30 samples. Data were obtained using questionnaire and analyzed using chi square test and logistic binary regression.

3. RESEARCH RESULTS

3. 1. Bivariate Analysis

a. Age relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District.

Table1. Age relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

No	Age	Coverage of Case detection rate				n	%
		Less		Good			
		n	%	n	%		
1	≥ 30 year	14	63,6	8	36,4	22	100
2	< 30 year	2	25	6	75	8	100
Total		16	53,3	14	46,7	30	100
p-value = 0,101; RP = 2,545; CI95% (0,736– 8,805)							

Table 1 shows that of 22 P2 TB officers aged> 30 years there were 14 people (63.6%) with less case detection rate and as many as 8 people (36.4%) with good case detection rate coverage. Whereas from 8 P2 TB officers who were <30 years old there were 2 people (25%) with less case detection rate and 6 (75%) with good case detection rate coverage. = 0,05) obtained p-value0,101 or pαThe result of chi square statistic test at significance value 95% (> α (0,05). This means that there is no significant correlation between age of P2 TB officer and case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency. The result value of RP = 2,545; CI95% (0.736-8805) with lower <1, so age is not a significant factor with case detection rate coverage by Puskesmas staff.

b. Gender relationship with case detection rate coverage by puskesmas officer at Puskesmas of Mimika Regency

Table2. Sexual relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

No	Sex	Coverage of Case detection rate				n	%
		Less		Good			
		n	%	n	%		
1	Female	10	55,6	8	44,4	18	100
2	Male	6	50	6	50	12	100
Total		16	53,3	14	46,7	30	100
p-value = 1,000; RP = 1,111; CI95% (0,551 – 2,239)							

Table 2 shows that of 18 female TB P2 officers there were 10 people (55.6%) with less case detection rate and as many as 8 people (44.4%) with good case detection rate coverage. Whereas from 12 P2 TB officers with male sex there were 6 people (50%) with less case detection rate and 6 (50%) with good case detection rate coverage. = 0,05) obtained p-value 1,000 or pαThe result of chi square statistic test at significance value 95% (> α (0,05). This means that there is no significant correlation between sex of P2 TB officer with case detection rate coverage by Puskesmas officer at Puskesmas of Mimika Regency. The result value RP = 1.111; CI95% (0,551 - 2,239) with lower <1, so gender is not a

significant factor with case detection rate coverage by puskesmas officer.

c. Relation of education level with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency

Table3. Educational relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

No	Education	Coverage of Case detection rate				n	%
		Less		Good			
		n	%	n	%		
1	Low	3	60	2	40	5	100
2	High	13	52	12	48	25	100
Total		16	53,3	14	46,7	30	100
p-value = 1,000; RP = 1,154; CI95% (0,514 – 2,590)							

Table 3 shows that out of 5 P2 TB officers with low education there were 3 (60%) with less case detection rate and 2 (40%) with good case detection rate coverage. Whereas from 25 P2 TB officers with high education there were 13 people (52%) with less case detection rate and as many as 12 people (48%) with good case detection rate coverage. = 0,05) obtained p-value 1,000 or pαThe result of chi square statistic test at significance value 95% (> α (0,05). This means that there is no significant correlation of P2 TB officer education with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika. RP value value = 1.154; CI95% (0,514 - 2,590) with lower <1, so education is not a significant factor with case detection rate coverage by puskesmas officers.

d. Working relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District.

Table4. Working relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

No	Working period	Coverage of Case detection rate				n	%
		Less		Good			
		n	%	n	%		
1	≤ 2 year	5	62,5	3	37,5	8	100
2	> 2 year	11	50	11	50	22	100
Total		16	53,3	14	46,7	30	100
p-value = 0,689; RP = 1,250; CI95% (0,633 – 2,468)							

Table 4 shows that out of 8 P2 TB officers with a working period of <2 years there were 5 (62.5%) with less case detection rate and 3 (37.5%) with good case detection rate coverage. Whereas from 22 P2 TB officers who worked> 2 years there were 11 people (50%) with less case detection rate and as many as 11 people (50%) with good case detection rate coverage. = 0,05) obtained p-value 0,689 or pαThe result of chi square statistic test at significance value 95% (> α (0,05). This means that there is no significant correlation between the working period of P2 TB officers and the coverage of case detection rate by puskesmas officers in Puskesmas Kabupaten Mimika District. The result value of RP = 1,250; CI95% (0.633 - 2.468) with the lower <1, so the working period is not a significant factor with case detection rate coverage by puskesmas officers.

e. Relationship of training with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

Table5. Relation of training with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

No	Training	Coverage of Case detection rate				n	%
		Less		Good			
		n	%	n	%		
1	less	12	70,6	5	29,4	17	100
2	good	4	30,8	9	69,2	13	100
Total		16	53,3	14	46,7	30	100
p-value = 0,072; RP = 2,294; CI95% (0,960 – 5,483)							

Table 5 shows that out of 17 P2 TB trainees with fewer than 12 people (70.6%) with less case detection rate and 5 (29.4%) with good case detection rate coverage. Whereas from 13 P2 TB officers who had good training was more equal to 2 times there were 4 people (30,8%) with less case detection rate and 9 people (69,2%) with good case detection rate. = 0,05) obtained p-value 0,072 or pαThe result of chi square statistic test at significance value 95% (> α (0,05). This means that there is no significant correlation of training of P2 TB officers with case detection rate coverage by Puskesmas officers at Puskesmas Daerah

Regency of Mimika. The value of RP = 2,294; CI95% (0.960 - 5,483) with the lower <1 score, so training is not a significant factor with case detection rate coverage by puskesmas officers.

f. Duplicate task relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

Table6. Multi task relationships with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

No	Double position	Coverage of Case detection rate				n	%
		Less		Good			
		n	%	n	%		
1	Double task	12	70,6	5	29,4	17	100
2	Not	4	30,8	9	69,2	13	100
Total		16	53,3	14	46,7	30	100
p-value = 0,072; RP = 2,294; CI95% (0,960 – 5,483)							

Table 6 shows that out of 17 dual TB P2 officers there were 12 people (70.6%) with less case detection rate and 5 (29.4%) with good case detection rate coverage. While there were 13 non-duplicate P2 TB officers with 4 cases (30.8%) with less case detection rate and 9 (69.2%) with good case detection rate coverage.= 0,05) obtained p-value 0,072 or pαThe result of chi square statistic test at significance value 95% (> α (0,05). This means that there is no significant correlation between dual P2 TB officers with case detection rate coverage by Puskesmas officers at Puskesmas Daerah Regency of Mimika. The value of RP = 2,294; CI95% (0.960 - 5,483) with the lower <1, so duplicate tasks are not a significant factor with case detection rate coverage by puskesmas officers.

g. Knowledge relation with case detection rate coverage by puskesmas officer

Table7. Knowledge relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

No	Knowledge	Coverage of Case detection rate				n	%
		Less		Good			
		n	%	n	%		
1	Less	6	85,7	1	14,3	7	100
2	Good	10	43,5	13	56,6	23	100
Total		16	53,3	14	46,7	30	100
p-value = 0,086; RP = 1,971; CI95% (1,131 – 3,436)							

Table 7 shows that from 7 P2 TB officers with less knowledge there were 6 people (85.7%) with less case detection rate and 1 (14.3%) with good case detection rate coverage. While from 23 P2 TB officers with good knowledge there were 10 people (43,5%) with less case detection rate and 13 people (56,6%) with good case detection rate. = 0,05) obtained p-value 0,086 or pαThe result of chi square statistic test at significance value 95% (<α (0,05). This means that there is no significant correlation of knowledge of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency. The result value of RP = 1,971; CI95% (1,131 - 3,436) interpreted that less knowledgeable P2 TB workers were 1.971 times higher in case detection rate coverage less than good knowledge of P2 TB officers.

h. Motivation relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika

Table8. Motivation relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

No	Motivation	Coverage of Case detection rate				n	%
		Less		Good			
		n	%	n	%		
1	Low	8	80	2	20	10	100
2	High	8	40	20	60	20	100
Total		16	53,3	14	46,7	30	100
p-value = 0,058; RP = 2,000; CI95% (1,076 – 3,717)							

Table 8 shows that from 10 low-motivated P2 TB officers there were 8 (80%) with less case detection rate and 2 (20%) with good case detection rate coverage. While from 20 high motivation P2 TB officers were 8 people (40%) with less case detection rate and 20 (60%) with good case detection rate coverage. = 0,05) obtained p-value 0,058 or pαThe result of chi square statistic test at significance value 95% (> α (0,05). This means that there is no significant correlation between motivations of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency. RP value =

2,000; CI95% (1,076 - 3,717) interpreted that P2 TB officers with low motivation risk 2 times higher case detection coverage less than high motivation.

i. Relationship of attitude with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency

Table9. Attitude relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

No	Attitude	Coverage of Case detection rate				n	%
		Less		Good			
		n	%	n	%		
1	Less	10	71,4	4	28,6	14	100
2	Good	6	37,5	10	62,5	16	100
Total		16	53,3	14	46,7	30	100
p-value = 0,136; RP = 1,905; CI95% (0,933 – 3,890)							

Table 9 shows that out of 14 P2 TB workers with fewer than 10 people (71.4%) with less case detection rate and 4 (28.6%) with good case detection rate coverage. While from 16 P2 TB officers with high attitude there were 6 people (37,5%) with less case detection rate and 10 people (62,5%) with good case detection rate coverage. = 0,05) obtained p-value 0,136 or pαThe result of chi square statistic test at significance value 95% (> α (0,05). This means that there is no significant correlation between attitudes of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas Daerah Regency of Mimika. The result value RP = 1.905; CI95% (0.933 - 3,890) with a lower <1 value that was interpreted as non-meaningful.

j. Supervision relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District.

Table 10 shows that out of 14 supervised P2 TB officers there were 12 people (85.7%) with less case detection rate and 2 (14.3%) with good case detection rate coverage. While from 16 P2 TB supervisory personnel there are 4 people (25%) with less

case detection rate and 12 (75%) with good case detection rate coverage. = 0,05) obtained p-value 0,003 or pαThe result of chi square statistic test at significance value 95% (<α (0,05). This means that there is a significant correlation of P2 TB officer supervision with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika. The result value of RP = 3,429; CI95% (1,429 - 8,227) interpreted that less supervision tends to detect case detection less than 2 times higher than well-conducted supervision

Table10. Supervision relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

No	Supervition	Coverage of Case detection rate				n	%
		Less		Good			
		n	%	n	%		
1	Less	12	85,7	2	14,3	14	100
2	Good	4	25	12	75	16	100
Total		16	53,3	14	46,7	30	100
p-value = 0,003; RP = 3,429; CI95% (1,429 – 8,227)							

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3.2. Multivariate Analysis

Multivariate analysis was used to obtain factors related to case detection rate coverage, bivariate analysis was needed and continued on multivariate test using p value <0.25 which can be seen in Table 11.

Table11. Bivariate Modelling

No	Variabel	*p-value*	Note
1	Age	0,101	Candidate
2	Sex	1,000	Not Candidate
3	Education	1,000	Not Candidate
4	Work period of P2 TB Staffs	0,689	Not Candidate
5	Staffs training	0,072	Candidate
6	Double tasks	0,072	Candidate
7	Knowledge	0,086	Candidate
8	Staffs Motivation	0,058	Candidate
9	Attitude	0,136	Candidates
10	Supervision	0,003	

Table 11 shows that the variables included in the multivariate test (p <0.25) were age, staff training, duplicate task, knowledge, officer motivation, attitude with multiple logistic regression test results using forward LR method in Table 12 below

Table12. Analysis of Multiple Logistic Regression Variables

No	Variables	B	p-value	RP	95% C. I. for Exp (B)	
					Lower	Upper
1	Supervision	2,890	0,003	18,000	2,756	117,554
	Constant	4,682	0,000	0,000		

Table 12 above shows that supervision is a major factor with less case detection rate coverage.

4. DISCUSSION

4.1. Age relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

The result showed that there was no correlation but not significant age of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas Area of Mimika Regency. P2 TB workers aged> 30 years found 63.6% with less case detection rate, whereas P2 TB officers <30 years old were 25% with less case detection rate coverage. Respondents are aware that age is a characteristic of individuals who cannot be separated from the performance of officers in the discovery of the TB census in the diagnosis of TB disease through cross check results. In this study, good performance more at the age of less than 30 years caused in the implementation of TB P2 program either from the observation or diagnosis has a good immune compared with the respondents aged >30 years, but the increasing age will be the better performance or skill officer due to the more experience he has gained in working

4.2. Sex relationship with case detection rate coverage by puskesmas officer at Puskesmas of Mimika Regency

The result showed that there was no correlation but not the gender of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency. Responds of female sex as much as 55.6% with less case detection rate coverage, whereas respondents of male gender as much as 50% with less case detection rate coverage. This shows the same proportion of performance. The results of the prevalence ratio test stated there is a chance of 1,111 times with case detection rate coverage in both men but not

significant. The meaninglessness is caused by factors affecting officer performance. This is because job design based on gender has also been taken into account, where women experience little difficulty when they have to field suddenly, so women are more placed in the office only, so that directly or indirectly have a performance that is not much different.

4.3. Relation of education level with case detection rate coverage by puskesmas officer at Puskesmas of Regency of Mimika Regency

The result of the research shows that there is no correlation but no significant education of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency. The majority of respondents of this study have a high education level that is D3, it meets minimum qualification standards of health personnel that the nurse and health personnel are at least educated Diploma III. Based on the results of the study the level of education is not related to the attainment of officers to the case detection ratepada pulmonary TB program in Mimika district because although the education is low, but with the experience and special training in the implementation of P2 TB program, resulting in performance that is not much different from the P2 TB officers who are educated high.

4.4 Working relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika.

The result of the research shows that there is no correlation but not significant time of work of P2 TB officer with case detection rate coverage by puskesmas officer at Puskesmas of Regency of Mimika Regency. P2 TB officers with working period of less than 2 years are 62,5% with less case detection rate, whereas P2 TB officer with working period >2 years is 50%

with less case detection rate. The results of the prevalence ratio test obtained RP value = 1,250; CI95% (0,633 - 2,468) so that the working period has a chance to performance, but not significant due to the working period will affect the knowledge of P2 TB officers. The longer the working period, the greater the knowledge of P2 TB officers in the field of the coverage. coverage of cases of more than 2 years working period of officers, some even exceeding 10 years as P2 TB officers, but case detection rate in Mimika regency is still below target. Thus not always the working period is directly proportional to the performance quality of an agency.

4.5 Relation of training with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika

The result showed that there was no correlation but no significant training of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency. There are less than 70.6% of the TB training officers with less case detection rate, whereas in P2 TB workers the training is better than 30.8% with less case detection rate coverage. The results of the prevalence ratio test results obtained RP value = 2.294; CI95% (0.960 - 5,483), so training has opportunities but is not meaningful. This is disbebakan from the knowledge and motivation of P2 TB officers. Training that is implemented basically is an educational process that aims to improve the ability or special skills of a person or group of people to improve its performance. In this study the respondents included in the training category were less than respondents with good training category. Though this training is very important in case of case invention. This research also functions in improving the effectiveness of officers in achieving the work in accordance with what has been set so that officers become more focused on the work and can take the initiative in work. The respondents who had not attended the training were caused by several factors, such as the number of officers who attended

the training while the quota per district was limited so that the TB officers waited for confirmation or direct orders from the DHO to be sent in the training, another factor was the rapid turnover of staff and the limited number of health personnel, so that many DOTS trained health workers have been transferred to other health services and replaced by officers who have not received training.

Based on the research that has been done, obtained the result that the party who held the training is the Mimika Regency Health Office. The puskesmas officers will be sent to attend the training on orders from the District Health Office. So, the officer's system is just waiting for the schedule to be sent to the training, the training schedule is rotating and the quota is limited, only 2 people per year. So for the District only a few puskesmas have been trained, for new officers are not yet scheduled for training. One respondent said that the training was not only from the Provincial Health Office, but had attended training from other instances related to TB case finding. There are some respondents who have never attended DOTS training at all. In fact, DOTS training is very important, because training is one of the efforts undertaken to improve the knowledge and skills of a person primarily in the discovery of tuberculosis patients. For the improvement of knowledge and skills it is necessary to conduct a training aimed at refreshing for TB program management officer of puskesmas. Training has long-term benefits that will help someone to take more responsibility in the future. Training programs are not only important to the individual but also important to the organization. The training is an educational process that aims to improve the skills or special skills of a person or group of people in order to improve their performance.

4.6 Duplicate task relationship with case detection rate coverage by puskesmas officer at Puskesmas of Mimika Regency

The result of this research shows that there is no correlation but not the double

task of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency. There are 70.6% of double-serving TB P2 TB officers with less detectable case detection rate compared to 30.8% of P2 TB officers and the prevalence ratio test indicates a trend towards performance but not significant due to other stronger factors affects multiple tasks, ie supervision that is not done routinely to know the obstacles experienced by P2 TB officers. There is no significant correlation between duplicate tasks with the finding of pulmonary TB cases, because TB officers who are double positions or non-concurrent positions have the same chance of less case detection rate coverage. Based on the results of interviews with respondents, the existence of duplicate duties is due to some human resources in the puskesmas is limited, so the only way is to concurrently work. However, in the presence of duplicate tasks caused the lack of attention of the officers to the patients who visited the puskesmas, while the TB officers were doing other work, other obstacles faced were when the activity of suspecting to the villages, officers cannot do the job because many are concurrent in part of the drug and no one to change jobs in the drug section. Based on the interviews conducted in this study, the majority of puskesmas staff has multiple tasks, including TB officials and laboratory personnel. This is because the puskesmas has many programs and is not matched by a sufficient number of workers. With the lack of human resources, many officers have multiple positions. Duties that are held by the officers include the treasurer, Verifier BPJS, Leprosy Program Holders, BP drugs, and others. Of the several officers who have double duty, there are also only have the task to be a laboratory worker, so just doing their duties as well as conducting a suspect to the field with the TB officials. Volume is charged to a worker and this is the responsibility of the work concerned. The high work load of each puskesmas will lead to complaints, the high workload of health workers can have a decrease in performance.

If the perception of a person's work on a good job, it will produce a good level of performance, and vice versa. Results of interviews with respondents, no respondents who feel have a burden on the double task. Respondents can share time with one task with another. There are officers working with midwives, cadres, pustu, nurses, and / or other devices in the village who may be helpful in finding cases on the ground. So the officers feel unencumbered in the case of suspected TB screening. However, the Puskesmas TB program holders believe that if a pulmonary TB officer has a double duty, it will result in maximal case-finding activities. A work if done on an ongoing basis and successful it will not cause a problem, while if two or three jobs must be done in the same time that will result in a job will end with no maximum, but it will also affect the performance of an officer.

4.7 Knowledge relation with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency

The result showed that there was no significant correlation between knowledge of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency. P2 TB officers with knowledge less 85,7% with less case detection rate, while good knowledge of P2 TB officer is 43,5% with less case detection rate coverage. Based on the result of the research, the lack of knowledge factor on P2 TB officers has a chance of achievement in CDR achievement less than 1,971 times compared with less knowledge. Respondents are well-informed as they have attended DOTS training, whereas the knowledge of TB officials is lacking based on observation results because information on TB is less accessible to the community including by TB officials. Officers need to improve their knowledge of pulmonary TB to increase their insight so that with increasing knowledge, it is expected that case detection rate can be reached and the implementation according

to technical guidance in achieving CDR can increase.

4.8. Motivation relationship with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency

The result showed that there was a significant correlation between motivation of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency. Low motivation P2 TB workers were 80% with less case detection rate and high motivation P2 TB officers were 40% with less case detection rate coverage. The test results obtained value RP = 2,000; CI95% (1,076 - 3,717) interpreted that P2 TB officers with low motivation were 2 times higher in case detection rate less than high motivation. This is due to the officers who have high motivation and have the opportunity to have a good performance. Because basically the motivation comes from within everyone. Observation results at puskesmas work performed by officers are still many, where the officers are still doing the tasks other than as a TB officer and as an employee has the drive to work secaramaksimal. Berdasarkan interview results with the officers, the results obtained that the constraints faced when the case invention activities vary, is the education of the sufferer, access to the TB suspect's premises if the officer will actively crawl, as well as the sputum problem of the patient who is not maximal so difficult to be identified in his laboratory. Officers complained that educating TB sufferers is not easy, theories that exist when compared to the fact that in the field is very different, and if we jump in the field sometimes not in accordance with expectations. This is caused by several factors, the most determinant is due to lack of educational factors. So that society is difficult to be invited to communicate. Currently the puskesmas of Mimika district passively collecting activities is more done than active crawl. The finding of new case of smear positive that is passive means health center officer just waiting for community / patient come kepuskesmas to

check it. Another factor of the CDR rate that is still under target is the participation of the community in utilizing the Puskesmas service is still lacking.

4.9 Attitude relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District

The result of this research shows that there is no significant correlation between attitude of P2 TB officer with case detection rate coverage by puskesmas officer in Puskesmas of Regency of Mimika Regency. P2 TB officers with less attitude were 71.4% with less case detection rate and high attitudinal P2 TB officers 37.5% with less case detection rate coverage. The P2 TB Officer revealed that the team in P2 TB at the Mimika district health clinic is good despite not reaching the target. Some puskesmas have also implemented cooperation with several parties. Some also still find suspect passively, in the sense that only find patients in the laboratory alone and CDR results have increased from the previous year. Other respondents also explained that suspect netting activities can not be solved with the officers themselves, but should involve all parties as a whole. One of the respondents, whose CDR figures are still below target, argues that the screening activity is not easy and must work hard to be able to raise their CDR targets. Based on the results obtained, the high motivation of P2 TB officials is of the opinion that it is still not satisfied with the low achievement of CDR in Mimika Regency is still under target and will strive to increase the frequency of work in TB program handling especially new case finding activities.

4.10 Supervision relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika District.

The result of the research shows that there is a significant correlation between P2 TB supervision and case detection rate coverage by puskesmas officer in Puskesmas of Mimika Regency. Officers of

P2 TB who stated that supervision is less than 85.7% with less case detection rate and P2 TB officers who stated good supervision is 25% with less case detection rate coverage. The result of prevalence ratio value is interpreted that less supervision tends to less case detection coverage 3,429 times higher than good supervision. In this study, lack of supervision has an impact on low motivation and supervision activities conducted systematically it will motivate P2 TB officers to improve job performance and better job implementation.

4.11. Determinant factor detected coverage of case detection rate

Multivariate test results indicate that supervision is the main factor with less case detection rate coverage in puskesmas of Mimika Regency. The lack of supervision and evaluation to subordinates has an impact on the officer's knowledge about the program being run or undergoing a change, besides the lack of supervision has an impact on the officer motivation in the case detection rate coverage. According Hasibuan (2012), knowledge and motivation can be influenced by external factors such as supervision or supervisor who becomes responsible. Thus, it is expected that the health office can perform a supervision to their subordinates to evaluate the obstacles in the P2 TB officers to the coverage of case detection rate.

5. CONCLUSION

Based on the results of the discussion can be summarized as follows:

1. There is a relationship but not significant age with case detection rate coverage by puskesmas officer at Puskesmas of Mimika Regency Region (p-value 0,101; RP = 2,545; CI95% (0,736- 8,805).

2. There is a correlation but no significant gender with coverage of case detection rate by puskesmas officer in Puskesmas Kabupaten Mimika (p-value 1,000; RP = 1,111; CI95% (0,551 - 2,239).

3. There was no significant but non-significant association of education with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika (p-value 1,000; RP = 1,154; CI95% (0,514 - 2,590).

4. There was a significant but non-working relationship with case detection rate coverage by puskesmas officers at the Puskesmas Kabupaten Mimika (p-value 0.689; RP = 1.250; CI95% (0.633 - 2.468).

5. There was no significant but significant association of training with coverage of case detection rate by puskesmas officers in Puskesmas Kabupaten Mimika (p-value 0,072; RP = 2,294; CI95% (0,960 - 5,483).

6. There is a relationship but not the meaning of duplicate tasks with coverage of case detection rate by puskesmas officers at Puskesmas Kabupaten Mimika (p-value = 0,072; RP = 2,294; CI95% (0,960 - 5,483).

7. There is no significant but insignificant knowledge with case detection rate coverage by puskesmas officers at the Puskesmas Kabupaten Mimika (p-value = 0.086; RP = 1.971; CI95% (1,131 - 3,436).

8. There is no significant but motivational relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika (¬p-value = 0,058; RP = 2,000; CI95% (1,076 - 3,717).

9. There is a relation but not significant attitude with case detection rate coverage by puskesmas officer at Puskesmas Regency of Mimika Regency (p-value 0,136; RP = 1,905; CI95% (0,933 - 3,890) with lower <1 value which interpreted insignificant attitude.

10. There is a meaningful correlation relationship with case detection rate coverage by puskesmas officers at Puskesmas Kabupaten Mimika (p = value = 0,003; RP = 3,429; CI95% (1,429 - 8,227).

11. Supervision is a determinant factor with case detection rate coverage by puskesmas officers at Puskesmas Daerah Regency of Mimika

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