

The Effect Of KAP Model On The Occurrence Of Tuberculosis In The Working Area Of Padang Serai Health Center In Bneγκkulu City In 2025

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ABSTRACT

Introduction: Tuberculosis (TB) is one of the leading causes of death from infectious diseases worldwide. According to data from the Ministry of Health of the Republic of Indonesia (2023), the national prevalence of pulmonary TB is recorded at 0.30%, with Central Papua having the highest prevalence at 1.15% and Bali the lowest at 0.09%. According to WHO data (2024), Southeast Asia accounts for 46% of the total global TB cases. This situation indicates that TB control remains a top priority, especially in developing countries like Indonesia. This study aims to determine the effect of the KAP model on tuberculosis occurrence in the Working Area of Padang Serai Health Center of Bengkulu City in 2025. **Method:** The method used in this study was a quantitative analytical study with a cross-sectional approach, with a sample of 91 people using total random sampling. Data analysis used Chi-square and logistic regression. **Result and Discussion:** Univariate analysis results showed that respondents had good knowledge (58.2%), favorable attitudes (59.3%), and good behavior (65.9%). Bivariate analysis results showed a significant correlation between knowledge ($p=0.000$), attitude ($p=0.000$), and behavior ($p=0.001$) and the occurrence of pulmonary TB. Multivariate analysis results showed that only attitude had a statistically significant effect on the incidence of pulmonary TB ($p=0.013$; $OR=7.978$; 95% $CI: 1.537-41.428$). **Conclusion:** It is expected that community health centers can coordinate with health workers to provide health education regarding the causes of tuberculosis and tuberculosis prevention, as well as encourage the community to actively participate in tuberculosis prevention activities at the health center.

INTRODUCTION

TB is an infectious disease that is transmitted directly and caused by the bacterium *Mycobacterium tuberculosis*. Although most TB infections occur in the lungs, the disease can also affect other organs of the body (Arisandi & Novitry, 2024).

Based on data from the World Health Organization, the highest mortality rate from tuberculosis (TB) in the world is recorded in Central Africa, at 148.01 per 100,000 population. Meanwhile, the lowest mortality rate is in Western Europe, namely in the Netherlands, at 0.07 per 100,000 population. Southeast Asia accounts for about 46% of global TB cases. Among the countries in this region, Timor-Leste has the highest incidence of TB, at 127.88 per 100,000 people, while Singapore has the lowest incidence, at 0.34 per 100,000 people (WHO, 2024).

Based on data from the Bengkulu City Health Office, the highest number of tuberculosis patients was at the Padang Serai Community Health Center with 59 cases, followed by the Telaga Dewa Community Health Center with 47 cases. Meanwhile, the lowest number of tuberculosis patients was at the Lingkar Barat Community Health Center with 7 cases, followed by the Kampung Bali Community Health Center and the Kualalempuing Community Health Center with 6 cases (Bengkulu City Health Office, 2023).

The Padang Serai Community Health Center in Bengkulu City is one of the health centers with the highest number of cases. Based on data obtained from the Padang Serai Community Health Center, in 2025 from January to June there were 20 cases consisting of 9 women and 11 men. In 2024, there were 54 cases consisting of 36 men and 18 women, while in 2023 there were 82 cases consisting of 42 men and 40 women (Padang Serai Community Health Center, 2025).

RESEARCH METHODS

This study used quantitative analytical research with a cross-sectional approach, a cross-sectional research design (Sugiyono, 2019). The research was conducted in the working area of the Padang Serai Community Health Center in Bengkulu City, and the research was carried out in July 2025. The population in this study consisted of all patients who underwent pulmonary TB

examinations, both positive and negative, in the Padang Serai Community Health Center working area in 2024, totaling 949 patients. The sample in this study consisted of 91 samples in the Padang Serai Community Health Center working area in Bengkulu City.

RESULTS

Based on Table 1, it can be seen that of all respondents with pulmonary TB, 28 respondents (73.7%) had insufficient knowledge, while 10 respondents (26.3%) did not have pulmonary TB. Meanwhile, respondents with good knowledge who had pulmonary TB numbered 6 respondents (11.3%), and 47 respondents (88.7%) did not have pulmonary TB. For the attitude variable, there were 28 respondents (75.7%) with an unfavorable attitude who had pulmonary TB, while 9 respondents (24.3%) did not have pulmonary TB. Among respondents with favorable attitudes, only 6 respondents (11.1%) had pulmonary TB, while 48 respondents (88.9%) did not have pulmonary TB. Furthermore, in terms of behavior, 19 respondents (61.3%) with poor behavior had pulmonary TB, while 12 respondents (38.7%) did not have pulmonary TB. On the other hand, 15 respondents (25.0%) with good behavior had pulmonary TB, while 45 respondents (75.0%) did not have pulmonary TB. These findings indicate that knowledge, attitude, and behavior have clear differences in proportion between the groups with and without pulmonary TB.

Based on Table 2, it is known that the results of logistic regression show that only the attitude variable has a significant effect on the incidence of pulmonary TB with $p = 0.013$ and odds ratio (OR) = 7.97 (95% CI: 1.54 – 41.43). This means that respondents with an unsupportive attitude are nearly 7.97 times more likely to experience pulmonary TB compared to respondents with a supportive attitude, after controlling for knowledge and behavior variables. Meanwhile, the knowledge variable (OR = 3.58; $p = 0.139$) and behavior variable (OR = 2.08; $p = 0.200$) did not have a statistically significant effect in this model. However, the OR values of these two variables indicate a tendency toward increased risk, although not strong enough to be declared as dominant risk factors in this model.

Tabel 1. Kejadian Tuberkulosis

Variabel	Kejadian Tuberkulosis			
	Iya		Tidak	
	N	%	N	%
Knowledge				
Less	28	73,7%	10	26,3%
Good	6	11,3%	47	88,7%
Attitude				
Unfavorable	28	75,7%	9	24,3%
Favorable	6	11,1%	48	88,9%
Behavior				
Kurang	19	61,3%	12	38,7%
Baik	15	25,0%	45	75,0%

Tabel 2. Pengaruh KAP

Variabel	Odds Ratio (OR)	95% CI OR	p-value	Standar Error (SE)	Z	Keterangan Signifikansi
Knowledge	3,581	0,668 – 19,409	0,139	3,088	1,48	Tidak Signifikan
Attitude	7,978	1,537 – 41,428	0,013	2,706	2,47	Signifikan
Behavior	2,084	0,658 – 7,385	0,200	1,596	1,28	Tidak Signifikan
constant	0,187	0,069 – 0,521	0,001	0,898	-3,23	Signifikan

DISCUSSION

The results of the study indicate a significant relationship between knowledge, attitudes, and behavior and the incidence of tuberculosis. In this study, the factor influencing the incidence of tuberculosis in the working area of the Padang Serai Community Health Center was attitude. Based on the logistic regression results obtained through the STATA application, it was found that only the attitude variable had a significant effect on the incidence of pulmonary TB ($p = 0.013$) with an odds ratio (OR) = 7.978 (95% CI: 1.536 – 41.427). This means that respondents with unsupportive attitudes are approximately 7.9 times more likely to experience pulmonary TB than respondents with supportive attitudes, after controlling for the variables of knowledge and behavior. Meanwhile, the knowledge variable had an OR = 3.581 ($p = 0.139$) and the behavior variable had an OR = 2.084 ($p = 0.200$).

This shows that respondents with less knowledge are more likely to suffer from pulmonary TB, and conversely, respondents with good knowledge are less likely to suffer from pulmonary TB. Unsupportive attitudes, such as low awareness of the importance of wearing a mask when coughing or sneezing, lack of awareness of the importance of early detection, and doubts about the effectiveness of TB treatment, as well as unsupportive behaviors, such as not wearing a mask when coughing or sneezing, spitting indiscriminately, not maintaining environmental hygiene, and not complying with treatment, can increase the chances of disease transmission.

The results of this study are in line with the research by Fera Novitry (2024), which states that individuals with low levels of knowledge have a higher risk of suffering from pulmonary TB compared to individuals with good knowledge about the disease. According to Ihsan et al. (2024), attitudes that do not support treatment, such as non-compliance in undergoing routine TB therapy, can worsen the condition of patients and increase the risk of transmission. Budi et al. (2024) found that non-compliance with treatment is significantly associated with an increased risk of pulmonary TB. Similar findings were also reported by Simanjuntak et al. (2019), who concluded that even with high knowledge, without the support of positive attitudes, TB prevention efforts are not effective.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. Most respondents in the working area of the Padang Serai Community Health Center in Bengkulu City in 2025 have a good level of knowledge about pulmonary TB, but 41.8% of respondents still have insufficient knowledge.
2. Most respondents showed supportive attitudes toward the prevention and control of pulmonary TB, but 40.7% of respondents still had unfavorable attitudes.
3. Most respondents exhibited supportive behaviors in the prevention of pulmonary TB, but 34.1% of respondents still exhibited behaviors that were not in line with the principles of infectious disease prevention.
4. There is a significant relationship between knowledge ($p = 0.000$), attitude ($p = 0.000$), and behavior ($p = 0.001$) and the incidence of pulmonary TB in the working area of the Padang Serai Community Health Center in Bengkulu City in 2025.
5. Based on multivariate analysis, only the attitude variable had a statistically significant effect on the incidence of pulmonary TB ($p = 0.013$; OR = 7.978), while the knowledge and behavior variables did not show a significant effect after being controlled in the regression model.

Recommendations

The results of this study are expected to contribute to public health knowledge, particularly in environmental health and disease prevention. Recommendations:

1. Community health centers are expected to increase promotional and preventive efforts through ongoing health education activities related to pulmonary TB, with a focus on improving attitudes and changing community behavior.
2. For the Bengkulu Dehasen Faculty of Health Sciences, it is necessary to encourage students and lecturers to conduct further research on other factors related to pulmonary TB, such as housing conditions (ventilation, housing density, lighting) and access to health services.
3. For future researchers: Future researchers are advised to include variables that have not yet been studied, such as nutritional status, household humidity levels, or family support for TB patients. Qualitative research can also be conducted to explore in greater depth the reasons behind community attitudes and behaviors toward pulmonary TB.

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