

RISK FACTORS OF TUBERCULOSIS: A NEW PATH ANALYSIS EVIDENCE FROM PONOROGO, EAST JAVA

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ABSTRACT

Background: Tuberculosis remains a major health problem worldwide. In 2016, 6.3 million new cases of TB were reported (up from 6.1 million in 2015), equivalent to 61% of the estimated incidence of 10.4 million. This study aimed to determine risk factors of tuberculosis in Ponorogo, East Java, using a path analysis model.

Subjects and Method: This was a case control study conducted in Ponorogo, East Java, from April to May 2018. A sample of 200 study subjects was selected for this study by fixed disease sampling, consisting of 100 adults with tuberculosis and 100 adults without tuberculosis. The dependent variable was tuberculosis. The independent variables were age, gender, education, nutritional status, dwelling density, smoking, and alcohol drinking. Data on tuberculosis infection status were obtained from the medical record at District Health Office Ponorogo. The data were collected by questionnaire and analyzed by path analysis model on Stata 13.

Results: The risk of tuberculosis increased with BMI ≥ 25 ($b = 2.50$; 95% CI = 0.51 to 4.50; $p = 0.014$), smoking ($b = 2.42$; 95% CI = 0.74 to 4.11; $p = 0.005$), lack of lighting ($b = 3.11$; 95% CI = 1.34 to 4.86; $p = 0.001$), alcohol drinking ($b = 2.15$; 95% CI = 0.75 to 3.56; $p = 0.003$), densed dwelling ($b = 2.31$; 95% CI = 0.69 to 3.92; $p = 0.005$), and age ≥ 44 years ($b = 1.51$; 95% CI = -0.01 to 3.02; $p = 0.051$). The risk of tuberculosis was indirectly affected by education.

Conclusion: The risk of tuberculosis increases with BMI, smoking, lack of lighting, alcohol drinking, dwelling density, and age ≥ 44 years.

Keywords: tuberculosis, age, dwelling density, smoking, alcohol drinking, education

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