



SK Rektor No : 653/UN7.P/HK/2018

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*"Public Health Empowerment for Tropical and Coastal Regions to Achieve SDG's"*

July, 30<sup>th</sup> - 31<sup>st</sup>, 2018  
Semarang, Indonesia



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# Housing Condition as Tuberculosis Infection Risk Factor

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## Abstract

Indonesia is a country with the third tuberculosis (TB) incidence in the world. Bandar Lampung is one of the cities in Indonesia with a high TB incidence. TB incidence in the city increased about 80% during four years period (2,056 cases in 2016 compared to 1,195 cases in 2012). Bandar Lampung is located in the fifth poorest province in Indonesia, which closely related to poor housing condition. This study aimed to identify significant influence of housing condition, which consisted of variables: ventilation, in-house sunlight, in-house smoking pollution and in-house TB contact; to TB infection. A case control study was used to study the influence of related variables. Case sample group consisted of 31 smear-positive TB patients; meanwhile control sample group consisted of 62 patients without TB. Both sample groups were obtained from Sukaraja and Panjang Community Health Service which have performing Directly Observed Treatment Shortcourse and have highest TB incidence in Bandar Lampung. Data were collected by using structured interview questions and observation; and was then analyzed using bivariate Chi square analysis. Less ventilation (odds ratio/OR: 4.747; 95 % confidence interval/CI: 1.875–12.022), no in-house sunlight (OR: 5.219; 95 % CI: 2.040–13.355), existence of in-house smoking pollution (OR: 3.067; 95 % CI: 1.240–7.584) as well as existence of in-house TB contact (OR: 10.688; 95 % CI: 3.792–30.121) are TB infection risk factors. In conclusion, TB control program should be highlighted the concerned variables in order to accelerate TB incidence reduction, especially in countries with poor housing conditions.

**Keywords:** housing condition; tuberculosis; risk factor