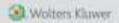


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# **Original Article**

# Prediction Model of Tuberculosis Transmission Based on Its Risk Factors and Socioeconomic Position in Indonesia

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### **Abstract**

Context: The current evidence shows that people in low-socioeconomic positions tend to be at high risk for tuberculosis (TB) transmission. 
Alms: The aim of this study is to identify the significance of socioeconomic position and TB risk factors to TB transmission, particularly in Bandar Lampung, Indonesia. Settings and Design: This cross-sectional study, conducting in January–November 2017, included 166 samples of smear-positive TB patients collected from 30 community health centers across the city that had implemented DOTS strategy. Subjects and Methods: The latent variables consisted of the following: socioeconomic position, housing, nutritional, healthcare access, and TB transmission, which was measured through corresponding indicators. The data were collected through in-depth interviews. 
Statistical Analysis Used: Data analyzed using the partial least square method. Results: Determinants of socioeconomic position through housing determinants significantly influence TB transmission with R<sup>2</sup> of 42.3%. They also show that education, housing density index, and internal house transmission are the strongest indicators in explaining their associated latent variables. Conclusions: TB control program should be integrated with education improvement, a reduction of housing density index, and strengthened examinations of internal house contacts. These programs should be supported by health institutions and other related institutions. The findings will improve TB control programs, especially in low- and middle-income countries with high-socioeconomic disparity.

Keywords: prediction model, risk factors, socioeconomic position determinants, tuberculosis