

**ABSTRACT****Analysis of Physical Environment House and The Existence of *Mycobacterium leprae* DNA on The Soil of House Floor in Leprosy Endemic Areas Camplong Subdistrict, Sampang District, Madura.**

Leprosy is a chronic infectious disease caused by *Mycobacterium leprae*. The prevalence rate of leprosy in Camplong subdistrict is included in the top five among others in Sampang District. Although the prevalence of leprosy has decreased due to treatment, but new cases ever increasing. The aim of this research was to analyze the relationship between the physical environment of houses and the existence of *M. leprae* DNA on the soil of house floor with the existence of leprosy patient in Camplong Subdistrict, Sampang District. The design of the research used in this study was crosssectional. The independent variables were the physical environment of house and the existence of *M. leprae* DNA, while the dependent variable was the existence of leprosy patient. The number of population in the study were 40 houses. Data analysis used Chi-Square and Fisher Exact test to determine the relationship of independent variables with the dependent variables. The results of Polymerase Chain Reaction (PCR) technique showed that *M. leprae* DNA exist in 10% of the soil samples. Statistic results showed that the temperature and wall of house had relationship with the existence of leprosy patient. But the result showed there was no significant relationship between the existence of *M. leprae* DNA in soil of house floor with the existence of leprosy patient in Camplong Subdistrict, Sampang District. Conclusions, although theoretically soil could be transmission medium for *M. leprae*, but this study showed that the existence of *M. leprae* was not depended on the existence of leprosy patient in that house, so every person in the endemic area had the same risk to exposure of *M. leprae* from environment. Suggestion, the important of increasing in public knowledge and awareness about the concept of healthy house and the important role of environment in the transmission of leprosy was necessary.

Keywords: *Mycobacterium leprae*, physical environment, leprosy, soil sample.