

# RISK FACTORS OF MALARIA IN LEMBATA DISTRICT, EAST NUSA TENGGARA

*By* Wihelmus Olin

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Wihelmus Olin, Rafael Paun

School of Health Polytechnics, Ministry of Health Kupang

### ABSTRACT

**Background:** Provincial Health Office of East Nusa Tenggara reported that the annual parasite incidence (API) in 2016 was 5.46 new cases per thousand populations, distributed in 22 districts. Lembata district is an endemic area with the highest API in the province. This study aimed to determine the risk factors of malaria in Lembata district, East Nusa Tenggara.

**Subjects and Method:** A case control study was carried out in Lembata district, East Nusa Tenggara. A sample of 800 patients was selected for this study, consisting of 400 malaria cases with positive laboratory result and 400 with negative laboratory result. The dependent variable was malaria incidence. The independent variables were education, knowledge, attitude, behavior, housing, and swamp. Data of malaria case were obtained from the medical record. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

**Results:** Malaria incidence increased with low education (OR= 2.24; 95% CI= 1.09 to 4.63; p= 0.029), poor knowledge (OR= 3.94; 95% CI= 2.67 to 5.81; p<0.001), negative attitude (OR= 6.62; 95% CI= 4.45 to 6.05; p= 0.042), unhealthy behavior (OR= 3.97; 95%CI= 2.63 to 5.43; p<0.001), poor housing (OR= 3.53; 95%CI= 2.30 to 5.43; p< 0.001), and close to swamp (OR= 2.80; 95% CI= 1.33 to 3.28; p= 0.023).

**Conclusion:** Malaria incidence increases with low education, poor knowledge, negative attitude, unhealthy behavior, poor housing, and close to swamp.

**Keywords:** malaria, education, knowledge, attitude, behavior, housing, swamp

#### Correspondence:

Wihelmus Olin. School of Health Polytechnics, Ministry of Health Kupang, Jl. Piet A. Tallo, Kupang, East Nusa Tenggara. Email: olinwem@gmail.com.  
Mobile: 081338048444

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