HOME ENVIRONMENT FACTORS ASSOCIATED WITH FALCIPARUM MALARIA IN LEMBATA, EAST NUSA TENGGARA

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ABSTRACT

Background: Malaria remains a global public health problem. Approximately 40% of the world’s population lives in more than 140 countries at risk of malaria, including Indonesia. The strategies employed to prevent and control malaria have been effective in reducing the burden of disease. Yet, as analyses of health outcomes become more refined, it is increasingly evident that poor and marginalized populations might not be benefiting from investments in malaria prevention and control. This study aimed to estimate home environment factors associated with *Falciparum* malaria infection in Lembata, East Nusa Tenggara.

Subjects and Method: This was a case control study conducted in Lembata, East Nusa Tenggara. A sample of 226 subjects was selected for this study, consisting of 113 *Falciparum* malaria cases and 113 controls. The dependent variable was *Falciparum* malaria infection. The independent variables were sunlight, distance to breeding place, house ventilation, use of wire net, and use of bed-net. Data on *Falciparum* malaria infection were taken from the medical record. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of *Falciparum* malaria infection decreased with sunlight penetrating breeding place (OR= 0.13; 95% CI= 0.02 to 0.66; p= 0.014), distance to breeding place (OR= 0.45; 95% CI= 0.22 to 0.95; p= 0.036), house ventilation (OR= 0.18; 95% CI= 0.08 to 0.39; p<0.001), used of wire net (OR= 0.15; 95% CI= 0.04 to 0.61; p= 0.008), and use of bed-net (OR= 0.09; 95% CI= 0.02 to 0.50; p= 0.006).

Conclusion: The risk of *Falciparum* malaria infection decreases with sunlight penetrating breeding place, distance to breeding place, house ventilation, use of wire net, and use of bed-net.

Keywords: malaria, *falciparum*, house, environment

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