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SATINEE LERTPRAPAI : FACTORS WHICH EFFECT THE
TRANSMISSION OF MALARIA AND ITS CONTROL IN THE RAINY SEASON :
A CASE STUDY IN TAK PROVINCE. THESIS ADVISOR : MONTIP
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Malaria is a common infectious disease in many tropical countries. Thailand is located geographically in a tropical zone and the transmission of malaria is widely found, for instance in Tak province. The main objective of this study is to find out the factors which effect the transmission and control of malaria in Tak province in the rainy season using a statistical model. A test of independence is used to find out the relationships between any two variables which are chi-square tested and Cramer's V valued and we use two and three-dimensional log-linear models to obtain estimated parameters and expected frequencies for two and three variables respectively. Finding out the factors effecting the transmission was based on the two dependent variables : experience with malaria and the number of experiences with malaria by use of a logistic regression and Poisson regression model repectively. The logistic regression model was also used to point out the factors which effect the control of malaria, concerning the two dependent variables : knowledge about malaria and knowledge about prevention. Among these models which were obtained, we chose the best one by analysis of deviance.

The results of this study show that most paired variables are significantly related at p -value < 0.05 . Causes of migration and reasons of staying overnight are highly related to personal data : sex, age, education, race, marital status, major occupation, minor occupation and income and provide the highest Cramer's V value. Thus, it can be concluded that the main causes of transmission are causes of migration and reasons of staying overnight. Knowledge about prevention is related to personal data and gives the maximum Cramer's V value. It is thus the most influential factor effecting control of malaria.

Factors effecting the transmission and control of malaria illustrated in the best statistical models are different from each other depending on the explanatory variables with the dependent variables : experience with malaria, number of experiences with malaria, knowledge about malaria and knowledge about prevention. The best models we obtain can be applied to see the tendency of transmission and control of malaria in the area where the transmission is found.