

Thesis Title Factors Related to Hookworm Reinfection after  
Treatment in Krabi Province  
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#### ABSTRACT

This prospective study aims at determining the reinfection rate and factors related to reinfection of Hookworm helminth in villages with 100 percent and less than 30 percent latrine coverage. Samples were 460 persons, 220 and 240 in village of 100 percent and less than 30 percent latrine coverage respectively, aged 2 to 82 years. Data were collected through interview using questionnaires plus Kato-Katz's faecal specimen examination. 282 infected persons were treated with single dose of albendazole 400 mg or 600 mg. Repeated stool examination was carried out after treatment at 14 days, 2, 4 and 6 months consecutively. Student's t-test, z-test were used for the difference test, Chi-square test, Relative risk were used to determine the relationship between factors and Hookworm reinfection.

The results revealed that the prevalence rate of Hookworm in both villages was comparable before treatment. Cure rate and egg reduction rate at 14 days after treatment were not different in both

villages. Factors including latrine coverage, shoes wearing behavior and defecating in latrine behavior demonstrated relationship to Hookworm reinfection at 6 months after treatment. The village with less than 30 percent latrine coverage showed 1.56 times higher risk than the village with 100 percent latrine coverage. Subjects who never or occasionally wear shoes had 3.43 times higher risk than those who constantly wear shoes among the group that always defecated in latrine and 17.73 times among the group that occasionally or never defecated in latrine. Stratification by shoes wearing behavior showed that, among subjects who never or occasionally wear shoes, those who occasionally or never defecated in latrine had 2.18 times higher risk than those who always done so. But this pattern was not found among subjects who constantly wear shoes.

During the period of 2, 4 and 6 months after treatment the increase of Hookworm eggs in the village with 100 percent latrine coverage was higher than that in the village with less than 30 percent latrine coverage. Similarly, in the same interval, the increase of Hookworm eggs, in subjects who never or occasionally wear shoes was higher than that in the subjects who constantly wear shoes and in subjects who occasionally or never defecated in latrine was higher than that in subjects who always defecated in latrine among the group that never or occasionally wear shoes.

Therefore, this study recommended that control of Hookworm infection should emphasize shoes wearing and defecation in latrine in addition to treatment.