

**Correspondence**

To the Editors

**Association between nutritional status and head lice infestation among school aged children: observation from rural border area of Thailand**

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Many infections are common among the school aged children in developing countries. Hair infection is a problem that is sometimes overlooked<sup>1</sup>. Head lice infestation is a common hair ectoparasite infection and is a public health problem for children in developing countries<sup>2</sup>. This infection is mainly seen in crowded areas with poor hygiene<sup>3</sup>. In general, the infection is asymptomatic or has few symptoms and is therefore, easily underdiagnosed<sup>3</sup>. An outbreak of head lice can occur among school aged children in a setting with poor sanitation<sup>4</sup>. Here, the authors report on a cross sectional school based study in rural area in Indochina namely Khokyang sub-district in North-

Eastern region of Thailand, a country in Southeast Asia (GPS location 5°00'N 103°07'E / 15°N 103.11°E / 15; 103.11). The setting is the border area between Cambodia and Thailand. High prevalence of paediatric malnutrition is reported in this setting<sup>5</sup>. An examination for head lice, parallel to nutritional status assessment, was performed in 2019 among 520 school aged children, who studied in primary school in this rural sub district. The association between nutritional status and head lice infestation among the studied children is shown in Table 1. There is a significant correlation between nutritional status and head lice infestation ( $p = 0.015$ ;  $p < 0.05$ ).

**Table 1: Nutritional status and head lice infestation among school aged children**

Status	With head lice infestation Number (%)	Without head lice infestation Number (%)
Overweight	1 (0.19 %)	17 (3.27 %)
Normal	15 (2.88 %)	280 (53.85 %)
Underweight	25 (4.81 %)	182 (35 %)

The clinical association is interesting. Atambay *et al* showed the relationship between head lice infestation and intestinal helminthiasis. Since intestinal parasitic infestation is an important factor contributing to malnutrition<sup>6</sup>, there might be an inter-relationship between head lice infestation and abnormal nutritional status. In fact, the risk for head lice infestation increased in children in the lower socioeconomic group, which is a common group that has nutritional status abnormality and the common population affected by head lice<sup>7</sup>. There might or might not be direct biological linkage between malnutrition and hair lice. Nevertheless, malnutrition is usually related to poor sanitation and poverty, which are known factors relating to poor hygiene that can lead to hair lice infestation. Although the prevalence of head lice infestation might be low among school aged children in developed area of Thailand (prevalence in a previous report = 0.27 %)<sup>8</sup>, this study shows the existence of a problem in the remote border area in Indochina.

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