

A-21: Behavioural patterns and malaria incidence in Kataragama and Buttala

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Entomological research has shown that malaria mosquitoes have 2 peak biting times: 0300 - 0600 and 1800-2100 h. It is generally advised, as an important control measure, that people living in malarious areas should take precautions to protect themselves from malaria mosquitoes during these 2 biting periods. However, prior to planning out an intervention to change the behavioural patterns of people in the peak biting hours, it is extremely important to know what people actually do during these peak hours and whether there is any malarial risk associated with those activities.

The objective of this paper is to identify time use patterns of villagers in Kataragama during the peak biting hours and their risks associated with malaria infection.

The study examines 125 case studies of malaria patients interviewed for a larger case control experiment on the use of impregnated bed-nets for malaria control in Moneragala District. Of the 125 patients interviewed, 72 were from the experimental area where the impregnated bed-nets have been distributed and the rest (43 cases) were from the control area where there was no intervention introduced by the project. The case studies were conducted in a random sample of patients who came for treatment at Mailagama treatment centres in Kataragama and Buttala. The patients were identified at the time of diagnosis and treatment and were interviewed in their homes after 24 h of treatment but before 48 h. The case studies were focused on the time use pattern of the patient during the 14 day period prior to the diagnosis and treatment.

Data indicates that in both areas, almost all the people were busy in the morning peak biting hours as well as in the evening peak biting hours. The important activities during these 2 peak periods were chena farming, watching TV or listening to radio, visits to relatives and friends, school homework by school going children, cooking, eating and sleeping. In both areas, the majority of patients were in the age groups of 6-15 years and 26-50 years, and were engaged in any one or combination of these activities. Sleeping without a net (control = 82.75%, experiment = 17.24%) and chena activities (control = 57.64%, and experiment = 49.41%) were the most frequent activities of the patients during the peak hours. These indicate that such activities have the greatest risk for malaria infection during the peak biting hours. The second most important categories of activities are watching TV and listening to radio (control = 50%, experiment = 50%). Home work by school children and assisted by other family members also has a risk for malaria (control = 56.52%, experiment = 43.47%), which is the last category of time use.

Results indicate that women had less malaria and most of them were engaged in activities or occupations within the household. Those who were engaged in activities and occupations outside the household, particularly in chena agriculture, and those who did not use nets while sleeping had the highest incidence of the disease. The majority of these patients were males. It was also revealed that males get malaria mostly during the chena cultivation season, which was also the rainy season too. Even though the households in the experimental areas were protected with impregnated bed-nets, the employed, elderly people who work outside the household during the agricultural season, especially during peak biting times of the day, were less protected with impregnated bed-nets.