

Risk Factors to Human Tick Infestations in Sri Lanka

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Abstract: Ticks are ectoparasites of major public health concern. Humans and animals are affected directly by tick bites and indirectly by disease transmission. A study was carried out to determine socio-ecological risk factors of human tick infestations in five selected districts, namely, Anuradhapura, Kandy, Kurunegala, Nuwara Eliya and Ratnapura. A total of 40 villages (8 per district) and 400 households (10 per village) were sampled randomly. Data was collected by interviewing household members using a questionnaire. The prevalence of tick infestation was highest in Kandy (65.4%) followed by Anuradhapura (58.3%) and lowest in Nuwara Eliya (23.7%). Tick infestations were significantly high in those who were engaged in outdoor activities ($\chi^2=146.180$, $p<0.001$). Among those 41.6% had been interacted with the forest in gathering firewood. Among the different professions, housewives (35.4%) and farmers (33.8%) experienced a high percentage of tick bites. Except in Ratnapura district, tick attacks were also significantly dependant on the presence of wildlife around the homeland ($\chi^2=42.313$, $p<0.001$). Tick infestation did not depend on the gender ($\chi^2=0.355$, $p=0.551$) or on the presence of pets and livestock at home ($\chi^2=0.548$, $p=0.459$) but in Kandy district, both factors posed a risk. Outdoor activities and the presence of wild animals around the house were identified as the major risk factors of human tick infestation.

Keywords: Tick Infestation, Risk Factors, Sri Lanka