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Factors associated with snakebite envenoming in the Ampara District

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Snake bite is an occupational hazard among people living in the tropical countries. In Sri Lanka, snake bites occur predominantly in the dry zone among rural plantation workers, leading to considerable morbidity and mortality. By identifying the victim characteristics and environmental circumstances leading to the bite, precautions could be taken to prevent snakebites. This study aimed at identifying the factors associated with snakebite in a rural district in Sri Lanka.

A community-based cross-sectional study was conducted among residents of at least 6 months in the Ampara District. As many as 2,500 households were sampled (50 households x 50 Grama Niladhari divisions in 10 divisional secretariat divisions) using a three-staged systematic sampling method. An interviewer-administered questionnaire was used to collect data on snake bites within the last 12 months, characteristics of the bite in relation to its victim, time and environment leading to its occurrence. The significance of factors associated with snakebite was assessed using SND test for one sample proportion. The sample consisted of 8,707 residents. The prevalence of snake bites within the last 12 months was 1.75% (n = 153). Of them, 88 were males (63.3%) and 10 were children (7.2%). Compared to an expected proportion of 50%, snake bites were associated with the following factors: being a male (n = 88; 63.3%); being an adult (n = 129; 92.8%); an outdoor bite (n = 119; 85.6%); bare-footed (n = 106; 76.3%); while walking or moving (n = 119; 85.6%); and having lower limbs exposed (n = 107; 77%). Of these factors, the outdoor environment, being bare-footed, movement and exposure of lower limbs were significant ($p < 0.05$). No relationship was seen with the time of day and adequacy of light. Snake bites were associated with movement and conditions of the outdoor environment. People in high risk areas should take adequate precautions to prevent snakebite when working outdoors.

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