

PREVALENCE AND FACTORS ASSOCIATED WITH INTESTINAL NEMATODE INFECTIONS AMONG CHILDREN IN THE HANTHANA TEA ESTATE, KANDY

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Living conditions and health education in the plantation sector in Sri Lanka lags behind the rest of the country. Intestinal nematode infections are prevalent among the communities that are affected by low socio-economic conditions, poor personal and environmental hygiene, overcrowding and limited access to clean water. This study was undertaken to identify the socio-demographic, environmental and behavioural factors associated with intestinal nematode infections among children aged 1-12 years, in the plantation sector, of Sri Lanka.

This cross-sectional study was carried out among 489 children in the Hanthana Tea estate from January to April 2013. Information regarding sanitary conditions, hygiene behavior, parents' education and de-worming date was obtained by interviewing the heads of households. Stool samples were subjected to wet preparation and formaldehyde-ether sedimentation techniques for identification of parasites. The data was analyzed with the SPSS version 17 statistical software.

The mean age of the study group was 6.2 (SD±3.4). The overall prevalence of nematode infections was 39.7% (194/489). Two species of nematode were identified with *Ascaris lumbricoides* (38.3%) and *Enterobius vermicularis* (2.1%). Boys had a slightly higher prevalence (40.4%) of infection than girls (38.9%). Children aged 4–6 years showed the highest prevalence (43.2%). Multivariate logistic regression module identified shared latrine facilities (OR = 1.76; CI = 1.14 – 2.71), living in attached houses (OR = 2.02; CI = 1.09 – 3.75), and de-worming in the preceding 2-3 months (OR = 3.71; CI = 1.58 – 8.71) or prior to 3 months (OR = 9.85; CI = 4.63 – 20.96) as the most important independent risk variables of all independent variables considered in this study. Gender, age, family clustering, water source, boiling of drinking water, eating unclean fruits, hand washing with soap after defaecation and before a meal were not significantly associated with intestinal nematode infection.

This study shows re-infection of those who received antihelminthic treatment 3 months back stressing the importance of implementing regular de-worming. Preventive measures directed towards using proper latrines and providing good housing facilities to control intestinal nematode infections in these children is recommended.