

Prevalence and risk factors associated with *Enterobius vermicularis* infection among 3 to 10-year-old children in the Halpathota Central Grama Niladari Division of Baddegama, Galle District, Sri Lanka

P. V. E. H. Goonawardhana¹, P. K. S. Geethika¹, G. Ghamshayeni¹, K. M. K. C. Gunaratne¹,
S. Gunawardena²

¹*Faculty of Medicine, University of Colombo, Sri Lanka*

²*Department of Parasitology, Faculty of Medicine, University of Colombo, Sri Lanka*

Enterobiasis, caused by the nematode *Enterobius vermicularis* (pinworm), remains one of the most common helminth infections worldwide, particularly affecting school aged children. This study investigated the prevalence and risk factors of *E. vermicularis* infection among children aged 3-10 years in the Halpathota Central Grama Niladari Division of Baddegama in Galle District, Sri Lanka. Using a descriptive cross-sectional study design, data were collected in August 2024 through interviewer-administered structured questionnaires and perianal scotch tape swabs for parasite detection. Detailed instructions were provided to parents/caregivers on the sampling process. Microscopic examination of swabs was done at the laboratory of the Department of Parasitology, University of Colombo. Data were analysed using SPSS statistical software v27 with calculation of frequencies and proportions for categorical variables, while chi-square analysis was done to investigate factors linked to prevalence of enterobiasis. Ethical clearance for the study was obtained from the Ethics Review Committee of the Faculty of Medicine, University of Colombo. Among 123 successfully analysed samples, the prevalence of enterobiasis was found to be 29.27% (n=36). While all parents/caregivers were aware of enterobiasis, significant risk factors associated with infection included younger age (3-7 years, p=0.027), inadequate hand washing before meals (p<0.001), finger-sucking behaviour (p<0.001), less frequent household cleaning (p=0.003), and lack of prior deworming (p=0.008). Other sociodemographic factors and hygiene practices showed no significant association with infection rates. These findings highlight the need for targeted interventions focusing on improving personal hygiene practices and regular deworming, particularly among younger children in this region.

Keywords: *Pinworm infection, Enterobiasis, Galle District, Sri Lanka, Scotch tape*