

PREVALENCE OF UNDERNUTRITION AND ROUND WORM INFESTATION IN PRESCHOOL CHILDREN IN THE KANDY DISTRICT ESTATE SECTOR

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The population in the tea estate sector of Sri Lanka comprises mainly of Tamils of Indian origin living in poor socioeconomic conditions. At present the prevalence of acute and chronic malnutrition among preschool children in this population is not known. This study therefore, aims to identify the prevalence of child undernutrition in the tea plantations of the Kandy district.

This study was conducted as a population based cross-sectional study, using 50 randomly selected clusters, with a total of 1456 children, aged 1 to 5 years. Children with inadequate weight for age were categorized as acutely malnourished whereas, children with inadequate height for age as chronically malnourished. The weight and height of the subjects were measured by research assistants who were trained on standard procedures and the use of equipment. The measurements were compared with the standards of the World Health Organisation (WHO). Two standard deviations below the age and sex appropriate level for weight and height of the WHO standard was used as the cutoff value. Furthermore, trained technicians were employed to check samples of stools of the subjects for the presence of round worm ova. For each stools sample a single saline smear and a single iodine smear was examined using standard methods. The presence of at least one round worm ovum in either saline or iodine smear was taken as positive evidence of round worm infestation. Since the data was categorical in nature the analysis was done using standard, categorical techniques of data analysis such as the Chi Square test.

Of the study sample, 46% were acutely malnourished, 43% chronically malnourished and 32.9% both acutely and chronically malnourished. The prevalence of acute malnutrition (AM) among boys and girls was 47.8% and 43.6% respectively. This difference seen between the two sexes was not statistically significant. In the case of chronic malnutrition (CM), the rate for boys was 42.9% whereas the girls showed a higher rate of 43.2%. However, this difference too was statistically not significant. Both AM and CM showed an increasing tendency from the 2nd year of life up to the 5th year but this too was not statistically significant. Round worm ova were present in the stools of 21.7% of the children. The prevalence of AM did not show a significant relationship with the prevalence of round worm infestation but there was a significant relationship between CM and the prevalence of round worm infestation ($p=0.01$).

Undernutrition and round worm infestation are highly prevalent in pre-school children in the estate sector of the Kandy district. It is worthwhile organizing special preventive programs with a view to eradicate these problems.

