

## Intestinal parasitic infections in children attending daycare center in Alfenas, southern Minas Gerais, Brazil

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The search for prevalence data of intestinal parasites in different locations is important for discerning the life quality and sanitary conditions of a community, and for the development of appropriate control measures. However, as the diagnosis of intestinal parasites is not a simple procedure, especially in population studies, due to difficulties in obtaining fecal samples, reliable prevalence data are scarce. This study was conducted to investigate the frequency of intestinal parasitic infections in children attending a municipal daycare center in Alfenas, MG, nominated as Centro Municipal de Educação Infantil (Municipal Center for Early Childhood Education) Profa. Lucinda Tamburini de Souza - Ipê Amarelo. In 2016, from the total of 187 children enrolled in the daycare, 114 (61.0%) have delivered the informed consent term signed for their parents or legal guardians, for participation of the child in the study, but only 43.3% (81/187) provided fecal samples for detection of intestinal parasites through parasitological exam. The participation rates in the project, with sample supply, showed great variation, from 21% to 75%, according to the involved class. The fecal samples were processed by the modified techniques of Lutz (spontaneous sedimentation) and Ritchie (formol-ether concentration) and the positivity rate for at least one commensal or parasite species was 24.7% (20/81), ranging from 20.7% to 31.0%, according to the age group involved. No cases of helminths were diagnosed and among the protozoa species, *Giardia lamblia*, *Entamoeba coli*, *Endolimax nana*, and *Blastocystis hominis* were detected. When checking the distribution of the different species according to the age groups, all four species were detected in the group 38-49 months, but in the group 26-37 months, only *G. lamblia* and *E. nana*. The most frequently detected parasite species was *G. lamblia*, with a positivity rate of 12.3% (10/81); the rates for girls and boys were, respectively, 14.3% (4/28) and 11.3% (6/53) with no statistical difference between the two sexes (OR=1.31; 95% CI: 0.34 – 5.07; p=0.15). Regarding to *G. lamblia*, the age group 26-37 months presented the highest positivity rate (27.6%), but no statistical significance was observed when compared to the age group 38-49 months, with positivity rate of 8.7% (OR=4.00; 95% CI: 0.76-21.11; p=0.09). The results suggest differences in the degree of risk for acquisition of intestinal parasites according to the involved group. The present study showed that children of municipal daycare centers in Alfenas, MG, could be at risk of infection by intestinal parasites, and suggested the need for a better evaluation of basic sanitation conditions as factors related to the transmission of intestinal parasites, and the importance for the implementation of environmental and health education programs in the community.

Keywords: “helminths”, “protozoa”, “daycare center”

