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The Relation between Hygiene with Soil- transmitted Helminthiasis and Giardiasis on the Elementary School Children in the Slums Area of Bagan Deli, District of Medan Belawan

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Abstract : Soil-transmitted helminthiasis and giardiasis mostly infect elementary school children, especially in tropical and developing countries. Hygiene is the important risk factor in the transmission of these infections. The aim of this research was to determine the correlation between hygiene and soil-transmitted helminthiasis and giardiasis in the elementary school children in slums area. The research was conducted observationally using a cross-sectional study approach from February to April 2014 on 110 children in slums area of Bagan Deli, District of Medan-Belawan, in the Province of North Sumatra. The subjects were selected randomly by sampling. Stool examination was conducted using the formalin-ether concentration technique. Data related to the hygiene level were taken by interview and observation the environment. The results were analyzed using the Chi square test. The level of good hygiene was 52.7% and the poor was 47.3%. The prevalence of intestinal parasites identified was 61.8% of soil-transmitted helminths, 13.6% of *Giardia lamblia*, 6.4% of the mixed infection of soil-transmitted helminths and *Giardia lamblia*, 10% of *Entamoeba coli*, 1.8% of *Iodamoeba butschlii*, and 0.9% of *Hymenolepis nana*. Statistical analysis showed a correlation between age and soil transmitted helminthiasis ($p=0.031$; CI95% 1.120-5436) and giardiasis ($p=0.025$ CI95% 1.178-16.766). However, there was no correlation between sex and soil transmitted helminthiasis and giardiasis. There was a significant correlation between hygiene and soil- transmitted helminthiasis ($p=0.000$; CI95% 2.183-12.243) and giardiasis ($p=0.001$; CI95% 1.993-43.702). Hygiene education in community might decrease these intestinal parasites infection.

Keywords : Giardiasis, hygiene, soil-transmitted helminthiasis, slums area.

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