

Burden and risk factors for *Schistosoma mansoni* infection among Primary School Children: a quantitative school-based cross-sectional survey in Busega district, Northern Tanzania

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Background

Intestinal schistosomiasis is one of the most common neglected tropical diseases in Tanzania. Despite massive praziquantel administration, data from Northern Tanzania have reported a prevalence of up to 93.2%. Because the disease is focal, depending on host, environmental and intermediate host factors, there is a need to acquire data in specific settings to better tailor interventions. Therefore, the study assessed the prevalence and factors associated with persistent transmission of intestinal schistosomiasis among school-age children in Busega district, Northern Tanzania.

Methods

A school-based cross-sectional study was conducted among 363 primary school children, randomly selected from school clusters in the Busega district. A single stool sample was collected from each child for *S. mansoni* ova and infection intensity examination using Kato-Katz. Factors related to intestinal schistosomiasis transmission were acquired through a questionnaire. A malacological survey was carried out to determine the *Biomphalaria* infectivity rate. Descriptive statistics and logistic regression analysis were conducted to analyze the association between schistosoma infection and factors related to transmission in this setting.

Results

Prevalence of *S. mansoni* infection was 41.3% (95% CI: 36.3-46.5), higher among male and statistically significantly higher among the younger group aged less than 11 years (46.4% vs 35.3%, $p=0.032$). Intensity of infection was high in 1.6%, moderate in 9.6% and light in 30.9%. Studying at Mwamayombo Primary School (AOR= 2.50, 95% CI: 1.12-5.60) was the only factors significantly associated with *S. mansoni* infestations. Snail intermediate host was *Biomphalaria sudanica* snails whose infectivity rate was 0.97% confirming ongoing transmission in the area.

Conclusions

There was a high prevalence of *S. mansoni* infection (41.3%) among school age children in Busega district. The presence of the infected *Biomphalaria sudanica* document persistent transmission, favoured by low knowledge and negative attitudes among school aged children. Hence, the need of multi-approach intervention for schistosomiasis prevention and elimination.

