

Prevalence of Single And Dual S. Mansoni And S. Haematobium Infections In Primary School Going Children, An Indicator of Infection Status In The Community After Two Years of Deworming In Taveta Sub County, Kenya

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Abstract:

Background: Parasitic infections caused by schistosomes are among the most prevalent communicable diseases of humans who live in endemic parts of the developing world. This study sought to investigate the infection status of *Schistosoma mansoni* and *Schistosoma haematobium* in primary school going children in Taveta Sub County, Kenya where there is an ongoing nationwide mass drug administration control programme for primary school children.

Methods: Stool and urine samples were examined using the Kato Katz Technique and filtration methods respectively. The sampling frame included 442 primary school children of both sexes in the county. The observed overall prevalence of both *S.mansoni* and *S.haematobium* were calculated by gender and age groups. Confidence intervals of 95% (95% CI) were calculated by binomial logistic regression. Comparison of prevalence by gender and age groups were tested on significance of fisher's exact test. The significance of the factors associated with infection of *S. mansoni* and *S. haematobium* in the school children was determined using the multivariable logistic regression model reporting the odds ratio at 5% level

Significance and 95% confidence intervals. Factors for the infection were selected using forward step-wise variable selection method.

Differences in proportions by age, sex and school were assessed by logistic regression, while differences in means were tested using the chi-square test and relationships between them were evaluated using the correlation co-efficient.

Results: The overall prevalence of *S. mansoni* was 11.8%, (95%CI 8.7%-14.6%) while that of *S. haematobium* was 24.3 %, (95%CI 20.4%-28.4%) respectively. Further analysis revealed that out of the 442 primary school children 24 had dual infection (both *S.mansoni* and *S. haematobium*).

Conclusions:

The prevalence of infection in Taveta Sub County is worth noting. Even after the annual National government deworming program for primary school children, there are still significant levels of infection. In addition some of the pupils have dual infections with *S.mansoni* and *S.haematobium* indicating double morbidity.

Infection with schistosomiasis is a vicious cycle that does not discriminate; therefore it is highly likely that the adult community is also infected.

Keywords: *S.mansoni*, *S.haematobium*, Prevalence, Dual infection

International Journal of Innovative Research and Advanced Studies (IJIRAS) Vol. 4 pp.255-261 (2017)

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