

Prevalence and factors associated with soil-transmitted helminth infections among preschool age children in Nyabyeya Parish, Budongo sub-county, Masindi district, Uganda

By

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A dissertation submitted in partial fulfilment of the requirements for the award of the degree of Master of Public Health of Makerere University

November 2016

Abstract

Background: Soil-transmitted helminths (STHs), though classified among the neglected tropical diseases, are a major public health concern in Uganda among other sub-Saharan African countries. Poor sanitation and hygiene, poverty, temperature, sex, age and behaviour are some of the factors associated with the STHs infections. Consequently, poor child development and performance have been linked to high prevalence of STHs. However, information on prevalence and associated factors among children of preschool age is still scarce.

Objectives: The study aimed at determining the prevalence and factors associated with STHs in preschool age children, in Nyabyeya parish, Budongo sub-county, Masindi District in order to generate information for designing mitigation and control strategies for helminths infections.

Materials and methods: A cross-sectional study was conducted between April and May 2015 in Nyabyeya parish in Budongo sub-county involving 126 preschool age children of 0.5 - 6 years randomly selected. The study utilized structured pretested questionnaire, observations and faecal tests to generate quantitative data on prevalence and associated factors. Flootation and microscopy were used to analyse faecal samples for prevalence. Data were entered in EPIINFOR 7, and analysed in STATA 10, to obtain appropriate descriptive, graphs, bivariate and multivariate analyses using logistic regression models. Effect modification was tested using the chi-square test of homogeneity and confounding using multivariate logistic regression.

Results and discussion: Of the 126 samples tested, 64.29% (81/126) of the respondents were positive for atleast one helminths. *Ascaris lumbricoides* was the most prevalent with 45.2% (57/126) positive cases, then hookworms and *strongyloides species* with 15.1% (19/126) positive cases respectively while the least prevalent was *Trichuris trichuria* with 10.3% (13/126) positive cases. Seventy percent of the children had single infections, 25% double infections and 5% triple infections. Having a hand washing facility reduced STHs infections by 99.5% (AOR=0.005, 95%CI; 0.0005, 0.063; P=0.000). Children who had been dewormed in the previous six months had 99% reduction in STHs as compared to children who had not been dewormed (AOR=0.01, 95%CI; 0.001, 0.072; P=0.000). Because of biological plausibility, age was considered an important influence in enhancing prevalence.

Conclusions and recommendations: Soil-transmitted helminths are highly prevalent in Nyabyeya parish among preschool age children. Improved hygienic and better health practices e.g. hand washing and deworming are factors found to reduce prevalence. Therefore, health promotion programmes focusing on sanitation and hygiene improvement and mass scale-deworming twice a year should be implemented in this area if STHs infections are to be maintained to a minimum level.