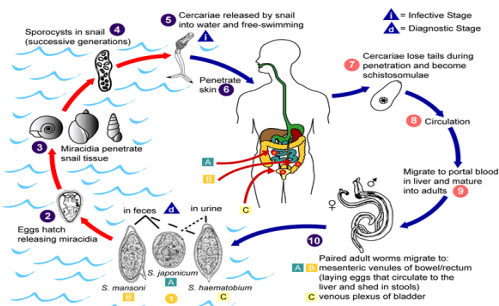


Prevalence and Risk factors Associated with *Schistosoma hematobium* Infection among Primary School Children in Blantyre, Malawi

Primary Investigator: Dr. Atupele Kapito; Data Collection Assistant: Sarah Radke (UNC-University of Malawi 2006 Summer Intern)

Life Cycle and global distribution of Schistosomiasis



Data Collection

Mrs. Maloya (community health worker) collecting urine specimens



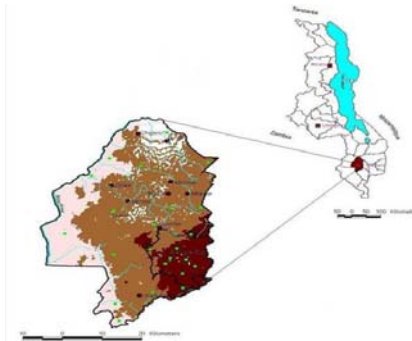
Standard 3 pupils selected for survey



Blantyre Deputy District Health Officer, Dr. Atupele Kapito and Sarah Radke



Location of selected schools



•23 of 195 schools in Blantyre District were selected and stratified into three elevation categories (<500 m, 500-1,000 m, >1,000 m)

• 50 standard 3 pupils were randomly selected from each school (n=1150)

• The pupils were asked a series of questions including whether they had passed blood in their urine over the past month

•Urine samples were collected and analyzed for blood by visual inspection, reagent strips and filtration/microscopy

Study Objectives

1). Estimate prevalence and identify risk factors associated with *S. hematobium* infection among primary school children.

2). Determine sensitivity and specificity of the questionnaire approach among the study population.

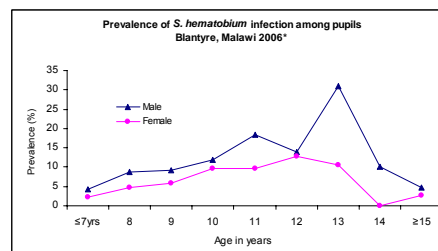
Special thanks to Dr. Atupele Kapito, Blantyre District Health Office and the UNC-University of Malawi 2006 Summer Internship Program

Study Results

• 353 (31%) of pupils reported passing blood in urine.

• The sensitivity of this survey question was 68% (compared with 67% in a previous study by Bowi et al 2002).

•The specificity of this survey question was 74% (compared with 80% in a previous study by Bowie et al 2002).



Risk factors associated with *Schistosoma hematobium*

Risk factor	N (Notected)	Odds Ratio*	95% CI
Age			
≥ 14 yrs	92 (6)	1.00	---
≤ 7 yrs	63 (2)	1.65	0.14, 20.03
8-10 yrs	562 (46)	3.36	1.28, 8.85
11-13 yrs	414 (69)	3.42	1.24, 9.93
Distance from school to open water source			
≥ 1 km	138 (22)	1.00	---
≤ 1 km	506 (78)	4.72	1.49, 14.99
Gender			
Female	547 (42)	1.00	---
Male	587 (80)	1.96	(1.16, 3.31)
History of schistosomiasis			
No	830 (50)	1.00	---
Yes	303 (73)	2.53	1.23, 5.20
Knowledge of water source existence			
No	474 (14)	1.00	---
Yes	657 (106)	2.09	1.14, 3.82

*Adjusted for age, gender, socio-economic status, location (urban/rural), main household water source, knowledge of existence of open water source, history of urinary schistosomiasis, history of schistosomiasis treatment, history of dysuria, distance from school to open water source