

**CO-INFECTION OF *PLASMODIUM* SPECIES WITH INTESTINAL
PARASITES IN CHILDREN WITH FEVER AGED TEN YEARS AND BELOW
IN KISII COUNTY, KENYA**

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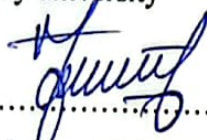


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DECLARATION

CANDIDATE

This thesis is my original work and has not been presented for degree or any other award in any university

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ABSTRACT

Plasmodium and intestinal parasites are the most prevalent parasites causing diseases in Africa and Asia. These diseases are common among children aged less than 10 years. Malaria and intestinal parasitic infections have an overlapping distributions and nonspecific symptoms. In most cases, fever in children is clinically diagnosed as malaria infection. This diagnosis tends to attract a treatment of malaria alone, and fails to treat other possible life threatening diseases like parasitic infections that share common symptoms such as fever with malaria. Thus, the present study was aimed at establishing the prevalence of *Plasmodium* and intestinal parasites co-infection in children with fever aged 10 years and below in Marani sub county, Kisii County. A hospital based cross-sectional study was conducted from the month of March to August 2018. This study used simple random and systematic sampling method. The sample size was of 389 children drawn from a population who had febrile conditions, seeking medication at health facilities and whose parents or guardians had agreed by signing a consent form. Data were collected using closed-ended questionnaire. Stool and blood samples were collected for microscopic identification of parasites. Formalin-ether concentration technique was done for stool preparation with saline, iodine and trichrome stains. Geimsa stain was used for blood slide preparations. Data were analyzed by Statistical Package for the Social Science (SPSS) software version 20. The present study established that the main complaint by children seeking medication at dispensaries in Marani was fever (89.7%), out of which, 81.7% were found to be having fever above 37.5°C. The present study revealed that *Plasmodium* co-infection with intestinal parasites had a prevalence of 22.8% in children and this co-infection was significantly associated with fever in children ($\chi^2=20.78$, $p=0.000$). The study established that the prevalence of *Plasmodium* co-infection with intestinal protozoa was 21.3% while co-infection between *Plasmodium* and intestinal helminths was 1.5%. Infections by *plasmodium* species, intestinal protozoa and intestinal helminth parasites were found to have significant relationship with fever in children ($\chi^2=100.8$, $p=0.000$), ($\chi^2=45.65$, $p=0.000$) and ($\chi^2=6.418$, $p=0.017$) respectively. The study also revealed that fever was significantly associated with infection by *Plasmodium falciparum* ($\chi^2=10.714$, $p=0.030$) or *Entamoeba histolytica* ($\chi^2=21.470$, $p=0.0404$). However, according to this study, it was found that neither *Ascaris lumbricoides*, *Strongyloides stercoralis* nor *Trichuris trichiura* was significantly associated with fever in children ($\chi^2=8.337$, $p=0.080$). Based on these findings, the study concludes that infections by *Plasmodium falciparum* and *Entamoeba histolytica* are most prevalent at 97.5% and 83.3% respectively in children. *Plasmodium* species and intestinal parasites infections are associated with severe fever in children. Therefore, the study recommends that clinicians should request both blood and stool samples for laboratory identification of a possible parasitic infection causing fever to a child before treatment to enhance disease management and control.