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# Prevalence and spatial distribution of Cryptosporidium species among dogs in Abuja, federal capital territory, Nigeria

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Cryptosporidium is an intracellular zoonotic protozoan parasite that causes cryptosporidiosis, a diarrheal disease of humans and domestic animals including dogs. Several species of Cryptosporidium infecting animals have been reported in humans highlighting the zoonotic nature of the disease. This study was aimed at determining the prevalence and associated risk factors of Cryptosporidium infection in dogs and children in Six Area Councils of FCT, Abuja. Three wards from each Area Council were chosen through random sampling. A total of 400 dogs' and 206 children's fecal samples were collected and analyzed by modified Ziehl Neelsen staining techniques. A sample was considered positive if at least one oocyst was identified under the microscope. Proportions were compared using R & C contingency table; chi-square and students T-test, where appropriate. Overall, 400 dogs ranging from 1 month to 14 years were examined. The overall prevalence of Cryptosporidium infection in dogs was 22.75% (91/400) by Ziehl Neelsen staining technique. There was significance difference (p=0.034) in the prevalence of Cryptosporidium in male, 27% (58/213) and female 17% (33/187) dogs. Between pure, local and cross breeds of dogs, the significance was statistically different (p=0.014), with prevalence being highest in the local breed type. In humans, people between ages 0 to 20 years were examined for the presence of Cryptosporidium. Overall prevalence of Cryptosporidium infection was 21.4% (44/206). There was no statistical difference (p=0.807) in prevalence of Cryptosporidium among male children 22% (24/109) while that for female was 20.6% (20/97). The isolation rate of Cryptosporidium oocysts in diarrheic stool was higher (29.8%) than in the non-diarrheic (14.3%). There is a strong association (p=0.007) between Cryptosporidium and diarrhea. The prevalence, risk and prediction map developed in this study using GPS and GIS provided detailed mapping of classified incidence and prevalence of Cryptosporidium infections in FCT Abuja.

**Biography**

M. N. Opara is a Lecturer in Veterinary Parasitology in the Faculty of Veterinary Medicine, University of Abuja, Nigeria. He graduated from the University of Ibadan as Doctor of Veterinary Medicine (DVM); MSc (Cellular Parasitology) and PhD (Veterinary Parasitology) all from the University of Ibadan, Nigeria. He started his teaching career in 2001.

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