

Companion animals as reservoirs and sentinels for zoonotic helminths in selected rural communities in Caraga Region, Philippines

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ABSTRACT

The growing population of companion animals as well as their close interaction with humans contributes to zoonotic transmission and persisting endemicity of intestinal helminths in poor and developing countries, such as the Philippines. Thus, this research focused on the role of dogs and cats as reservoirs and sentinels of intestinal helminths in selected communities in Mindanao, the Philippines. A total of 135 dog and 33 cat fecal samples from 120 households were collected and processed using the simple sedimentation and modified McMaster techniques as well as multiplex real-time PCR. Results showed high intestinal helminth prevalence in dogs and cats from selected communities of Agusan del Sur and Surigao del Norte. Hookworm and *Toxocara* spp. were the most prevalent intestinal helminths observed. Furthermore, results of the multiplex real-time PCR showed possible cross transmission of parasites to non-native host. The findings of the study showed the importance of dogs and cats as reservoirs and sentinels for a wide range of intestinal parasites, suggesting their major role in the zoonotic transmission of intestinal parasites. It also highlights the need for veterinary public health measures in the country to address the gaps in intestinal helminth control. The status of intestinal helminthiasis in companion animals stresses the need for an integrated approach to accelerate control and elimination of intestinal helminthiasis in the Philippines.

Keywords: Intestinal helminths, zoonoses, dogs, cats, companion animals, the Philippines