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Letter to the Editor

Comment on “Epidemiological Study of *Toxocara* Eggs in the Soil of Public Parks in Iran with an Emphasis on Climatic and Seasonal Diversity”

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Dear Editor-in-Chief

I was interested in reading the paper titled “Epidemiological Study of *Toxocara* Eggs in the Soil of Public Parks in Iran with an Emphasis on Climatic and Seasonal Diversity” by Shahbakhsh et al. that was recently published in the Iranian Journal of Parasitology (1). This paper is important with regard to One Health concepts, as it tackles an issue that considers the relationship between human, animal, and environmental health

One of the strengths of this research is that it is nation-wide and encompasses the country's major climate zones, including mountain, humid, and warm-dry zones, in all four seasons. This is an improvement since previous research used to be locality-based, which

means that this study is more balanced in understanding the topic. Having a large sample size of 1,445 soil samples is another strength of this research. Additionally, the study's emphasis on public parks where children often play is relevant.

A combination of sucrose flotation and direct smear microscopy is valid on a large scale for environmental samples, as it suits the standards of parasitological analysis. This organized presentation of information is helpful for understanding geographic distribution as well as seasonal variations. It is valid biologically for the data plotted with humidity and moderate temperatures, as the data corre-



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sponds with the survival pattern of *Toxocara* eggs.

Despite the mentioned strengths, some limitations must also be noted. Firstly, by using only morphological identification through light microscopic analysis, it is not possible to distinguish between species of *T. canis* and *T. cati*. This could pose a problem in identifying an accurate result since the eggs of various species of ascarid appear very similar. It would be beneficial to utilize molecular techniques, such as PCR analysis.

Second, despite the recognition of other climatic differences or seasonal variations, the absence of a definitive association in the generalized linear model suggests that other factors could also be involved.

Variables that were not taken into account, such as the type of soil, stray or pet animals, cleanliness of the park, or human or pet traffic, could be responsible as confounding variables.

One area that could use more research is the lack of testing for egg viability or infectivity. It is important to know egg viability since it is not necessarily true that egg presence is actually showing levels of transmission. It is more a

question of embryo viability in determining public health significance.

Adding human seroprevalence rates or animal infection rates with geographic overlap would help immensely in the One Health analysis.

Therefore, in conclusion, this study contributes to the understanding of environmental parasitology and zoonotic diseases. It indicates the extent of the contamination of the soil in various climate zones, pointing to the need for an integrated approach to monitoring, molecular analysis, and prevention using One Health. I believe this study inspires more research in this area.

Conflicts of Interest

None

Reference

1. Shahbakhsh M, Akhzari S. Epidemiological Study of *Toxocara* Eggs in the Soil of Public Parks in Iran with an Emphasis on Climatic and Seasonal Diversity. *Iran J Parasitol.* 2025;20(4):510-6.