**A Systematic Study on the Prevalence and/or Risk Factors of *Capillaria philippinensis* in Countries Outside the Philippines** 

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**BACKGROUND OF THE STUDY**

*Capillaria philippinensis (C. philippinensis)* is a human intestinal parasite first discovered in the Northern part of Luzon in the Philippines. This human intestinal parasite was first mistaken to be *Trichuris trichiura* due to a similar appearance of parasite eggs; yet, *T. trichiura* has a distinct feature of having flattened bipolar ends at the ends of their eggs. Numerous studies on the human intestinal parasite exist; however, a systematic review of

106 papers searched through Google Scholar, Science

Direct, and PubMed

39 papers irrelevant to

the parasite outside the Philippines has not been made since its discovery in 1963. **OBJECTIVES**

4 duplicated papers were excluded

63 possibly relevant ~~papers based on the tile~~ and abstract

C. philippinensis based on the title and

abstract were

excluded

This study generally aimed to create a systematic review of different research articles regarding *C. philippinensis* risk factors, prevalence, and infections in humans residing outside the Philippines.

Specifically, this study aimed to:

57 papers irrelevant to *C.*

*philippinensis* prevalence and

risk factors were excluded 6 *C. philippinensis* studies of

1.

Identify and correlate unique signs and symptoms experienced by people infected with capillariasis.

2.

Identify the possible causes of the spread of *C. philippinensis* to other countries.

3.

Find out the parasite’s mode of transmission to other countries.

4.

Establish certain demographics that contribute to *C. philippinensis* infections in humans.

**METHODOLOGY**

prevalence and risk factors were included

**RESULTS AND DISCUSSION**

One hundred six (106) journal articles were collated from three (3) databases using a strategy incorporating different search syntaxes. A full-paper analysis was performed, wherein the articles about the prevalence and/or risk factors of *C. philippinensis* were narrowed to six (6) based on the inclusion and exclusion criteria. Findings suggest the emerging prevalence of *C. philippinensis* in Egypt[2][3][4][7], the increased risk of capillariasis in females compared to males[2][3][6][7], the transnational transmission of *C. philippinensis* outside the Philippines through migratory birds[5][6], and the unfavorable food hygienic practices as a primary risk factor in acquiring capillariasis[2][6].

**No AuthorPublication**

**YearTitleLocation &**

A search for scientific articles published globally from 1963 to 2023 was conducted using Google Scholar, Pubmed, and ScienceDirect. The study included different types of observational study designs pertaining to the risk factors and prevalence of *C. philippinensis*. However, studies that pertain to nonhuman subjects are excluded.

**Study**

**DesignDemographics Prevalence Risk Factors**

1 Ali et al. 2017Prevalence of *Capillaria philippinensi*s in diarrheic patients using the small subunit ribosomal DNA

**CountryRegionSample Size**

(ssurDNA) geneEgypt Beni-Suef 121Cross sectionalFemale: 71.4% Male: 28.6% Age: 5 to 47

11.6% (95%

years

CI)

2 Monib et al. 2016Prevalence of Intestinal Parasites among Children Attending Assiut University Children’s Hospital,

Gender (females) - Active housewives (food preparation; contamination in fingernails after fish evisceration), Age (5 years to 47 years), Food (Ingesting raw fish)

Assiut, EgyptEgypt Assiut 260Cross sectionalFemale: 2% Male: 1.3% Age: 12 to 15 years 1.5% (95% CI) Gender (females), Age (12 months to 15 years), Food (Ingesting raw fish)

3 Attia et al. 2012 *Capillaria philippinensis* in Upper Egypt: has it become endemic? Egypt Assiut 21Cross sectionalFemale: 90.5% Male: 9.5% Age: 25 to 50

yearsNA Gender (females) - Active housewives, Age (25 to 50), Food (Ingesting raw fish)

4 Fan et al 2006 Serious diarrhea with weight loss caused by *Capillaria philippinensis* acquired in China: a case report China Hainan 1 Case Study Female: 1 case Age: 33-year old NA Food (Ingesting raw fish), Geographic proximity (Philippines & Taiwan), Fish-eating migratory birds

5 Lu et al. 2006 Human intestinal capillariasis (*Capillaria philippinensis*) in Taiwan Taiwan

Taitung, Hualian, Kaohsiung, Taipei, Keelung

30Retrospective

CohortMale: 60% Female: 40% Age: 12 to 76 years NAGender (males), Geographical proximity (Philippines), Fish-eating migratory birds, Food (Ingesting raw fish), Food infection from contamination by visceral content of infected fish

6 El-Karaksy et al. 2004 *Capillaria philippinensis*: a cause of fatal diarrhea in one of two infected Egyptian sisters Egypt El-Menia 2 Case Report Female: 2 cases Age: 8 & 12 years old NA Food (Ingesting raw fish)

**CONCLUSION**

Risk factors include raw fish ingestion, geographic proximity, foreign laborers, and fish-feeding migratory birds; with females, males, young adults, and the elderly being affected. There is limited evidence of existing infections in non-tropical countries.

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