

Prevalence of *Giardia duodenalis* among Asian children: a systematic review and meta-analysis

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Abstract

Giardia duodenalis is one of the major causes of diarrhea among children. We performed a systematic review and meta-analysis to assess the prevalence of *G. duodenalis* and associated risk factors among Asian children. We searched online databases (PubMed, Scopus and Web of Science) and Google Scholar search engine for studies published from 1 January 2000 to 15 March 2022 that measured the prevalence of *G. duodenalis* among Asian children. Accordingly, the pooled prevalence and 95% CIs were estimated using a random-effects meta-analysis model for the included studies. A total of 182 articles from 22 Asian countries met the inclusion criteria. The pooled prevalence of *G. duodenalis* infection among Asian children was estimated as 15.1% (95% CI 14.1 to 16%). The highest and lowest pooled prevalence values of *G. duodenalis* infection were estimated for Tajikistan and China as 26.4% (95% CI 22.9 to 30%) and 0.6% (95% CI 0.001 to 1.02%), respectively. The infection had a higher prevalence in males than in females (OR=1.24; 95% CI 1.16 to 1.31; $p<0.001$), which was statistically significant. Giardiasis is common among Asian children, hence, a prevention and control scheme of this protozoan in children should be considered by health officials and health policymakers, especially in Asian countries where the prevalence is highest.

Keywords: Asia, children, *Giardia duodenalis*, meta-analysis