

Global prevalence of intestinal protozoan parasites among food handlers: A systematic review and meta-analysis

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Abstract

Food handlers with improper personal hygiene practices have a significant role in transmitting foodborne parasites, including intestinal protozoa. The current systematic review and meta-analysis aimed to evaluate the global prevalence of intestinal protozoan parasites among food handlers. Multiple databases (PubMed, Scopus, Pro-Quest, Web of Science, Science Direct, and Google Scholar) were explored for relevant literature published from 1988 to April 2022. Pooled prevalence was estimated using the meta-package in R (version 3.6.1). One hundred thirty-eight papers, including 259,364 individuals, were considered in this study. The global pooled prevalence (95% confidence interval) was 0.143% (0.118–0.170%). The highest pooled prevalence was observed in the Western Pacific WHO Region (0.318%, 0–1.000%). The most prevalent protozoa was *Blastocystis hominis* (0.077%, 0.046–0.115%). Moreover, among different countries, Gambia had the highest pooled prevalence (0.501%, 0.459–0.544%). The prevalence of intestinal protozoan parasites estimated in the present study revealed that food handlers highly impact the global population. Periodic stool screening is necessary for food handlers to prevent intestinal protozoan infection. Additionally, a health education programme to raise awareness regarding food hygiene is recommended.