

VOLUME 41, NUMBER 6  
June 2024

ISSN 0189 - 160X

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# WAJM

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**WEST AFRICAN JOURNAL OF MEDICINE**

ORIGINALITY AND EXCELLENCE IN MEDICINE AND SURGERY



**OFFICIAL PUBLICATION OF**  
THE WEST AFRICAN COLLEGE OF PHYSICIANS *AND*  
WEST AFRICAN COLLEGE OF SURGEONS



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## ORIGINAL ARTICLE

# Prevalence of Intestinal Parasitic Infections Among Pregnant Women: A Multi-Centre Survey

*Prévalence Et Facteurs Associés Aux Infections Parasitaires Intestinales Chez Les Femmes Enceintes Dans Le Sud-Ouest Du Nigéria*

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## ABSTRACT

**BACKGROUND:** Intestinal parasitic infection (IPI) is a serious public health challenge often neglected in most developing countries. Pregnant women are a high-risk population for these infections which can result in adverse pregnancy outcomes such as maternal anaemia, preterm delivery and low birth weight.

**OBJECTIVE OF THE STUDY:** To assess the prevalence and factors associated with the risk of acquisition of intestinal parasitic infections among pregnant women attending antenatal clinics in selected public hospitals in Ibadan, South Western Nigeria.

**METHODS:** A hospital-based cross-sectional study was carried out among 598 pregnant women attending antenatal clinics in selected public hospitals in Ibadan, South Western Nigeria. Five public hospitals were purposively selected based on their antenatal clinic client attendance before this study. Data was collected to assess sociodemographic characteristics, health-seeking behaviours, water sanitation and hygiene practices (WASH). Stool samples from each pregnant woman were examined for the presence of intestinal parasites by microscopy using the direct wet mount and Ziehl Neelsen staining technique.

**RESULTS:** The overall prevalence of intestinal parasites was (96, 16.1%). *Ascaris lumbricoides* were the most prevalent parasites (68, 71.0%) followed by *Enterobius vermicularis* (16, 17.0%), *Entamoeba histolytica* (8, 8.0%) and the least identified parasite was hookworm (4, 4.0%). At bivariate analysis level, level of education, maternal income and type of waste disposal system in use were significantly associated with IPI infection. Using multivariate logistic regression, the age range of 30-34 years (AOR= 0.24, CI 0.08, 0.70) and having a degree (AOR=0.21 CI 0.05-0.85) were independent predictors of IPIs.

**CONCLUSION:** This study highlights a high prevalence of intestinal parasitic infection among pregnant women in our setting. The main predictive factors were the educational status and age of the pregnant women. There is therefore need for continuous health education to prevent intestinal parasitic infections in the at-risk population.

WAJM 2024; 41 (6): 668 - 674

**KEYWORDS:** Pregnant women, Intestinal parasitic infections, Public hospital, Ibadan, South West Nigeria.

## RÉSUMÉ

**CONTEXTE:** Les infections parasitaires intestinales (IPI) représentent un grave problème de santé publique souvent négligé dans la plupart des pays en développement. Les femmes enceintes constituent une population à haut risque pour ces infections, qui peuvent entraîner des conséquences néfastes sur la grossesse, telles que l'anémie maternelle, l'accouchement prématuré et le faible poids à la naissance.

**OBJECTIF DE L'ÉTUDE:** Évaluer la prévalence et les facteurs associés au risque d'acquisition d'infections parasitaires intestinales chez les femmes enceintes fréquentant les cliniques prénatales dans certains hôpitaux publics d'Ibadan, dans le sud-ouest du Nigéria.

**MÉTHODES:** Une étude transversale hospitalière a été menée auprès de 598 femmes enceintes fréquentant les cliniques prénatales dans certains hôpitaux publics d'Ibadan, dans le sud-ouest du Nigéria. Cinq hôpitaux publics ont été sélectionnés de manière ciblée en fonction de la fréquentation de leur clinique prénatale avant cette étude. Des données ont été recueillies pour évaluer les caractéristiques sociodémographiques, les comportements de recherche de soins, l'assainissement de l'eau et les pratiques d'hygiène (WASH). Les échantillons de selles de chaque femme enceinte ont été examinés à la recherche de parasites intestinaux par microscopie, en utilisant la méthode du montage humide direct et la technique de coloration de Ziehl-Neelsen.

**RÉSULTATS:** La prévalence globale des parasites intestinaux était de 96 (16, 1 %). Les *Ascaris lumbricoides* étaient les parasites les plus prévalents (68, 71,0 %), suivis par les *Enterobius vermicularis* (16, 17,0 %), les *Entamoeba histolytica* (8, 8,0 %) et les *Ankylostomes* (4, 4,0 %). Au niveau de l'analyse bivariée, le niveau d'éducation, le revenu maternel et le type de système d'élimination des déchets utilisé étaient significativement associés aux infections parasitaires intestinales. Selon la régression logistique multivariée, la tranche d'âge de 30 à 34 ans (AOR = 0,24, CI 0,08, 0,70) et le fait d'avoir un diplôme (AOR = 0,21, CI 0,05-0,85) étaient des prédicteurs indépendants des IPI.

**CONCLUSION:** Cette étude met en évidence une prévalence élevée d'infections parasitaires intestinales chez les femmes enceintes dans notre contexte. Les principaux facteurs prédictifs étaient le statut éducatif et l'âge des femmes enceintes. Il est donc nécessaire de poursuivre l'éducation sanitaire pour prévenir les infections parasitaires intestinales dans la population à risque. WAJM 2024; 41 (6): 668 - 674

**MOTS CLÉS:** Femmes enceintes, infections parasitaires intestinales, hôpital public, Ibadan, sud-ouest du Nigéria.

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**Abbreviations:** IPIs: Intestinal Parasitic infections; ANC: Antenatal care; WHO: World Health Organization; PHC: Primary Health Care; SHC: Secondary Health Care; THC: Tertiary Health Care.