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# Lack of association between asthma, atopy and helminthic infection in school-age children in the province of Bengo, Angola

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## Abstract

**Background:** Epidemiological studies conducted in several countries worldwide and in some African countries have shown that there is controversy in the relationship between asthma, atopy and helminthic infection. The aim of this study was to fully evaluate such relationship in children living in areas of high and moderate helminthic prevalence.

**Method:** Cross-sectional study using the methodology of the International study of Asthma and Allergies in Childhood (ISAAC), conducted from September to November 2017, in the Province of Bengo, Angola. From a total of 33 schools, five (15%), three in urban and two in rural areas were randomly selected. Atopy was defined by positive skin prick tests and/or specific IgE to aeroallergens (Phadiatop), and helminthic infection was defined by the presence of helminths in faeces. Data were obtained regarding helminthic load, types of helminths, previous infections and anti-helminthic treatments, and were analysed with SPSS Statistics v25.0.

**Results:** The sample consisted of 1023 children, 48% female, 58% 10 to 14 years old, and 61% living in urban areas. About 9% had asthma, 22% had rhinitis, 16% had eczema, 8% were atopic and 36% were infected by helminths. The most frequently detected helminths were *Ascaris lumbricoides* (23% of children), *Hymenolepis nana* (6%), and *Trichuris trichiuria* (4%). No relationship was detected between the prevalence of asthma, rhinitis or atopy and parameters of helminthic infection.

**Conclusion:** No relationship was apparent between the prevalence of asthma, atopy and helminth infection. Further studies are warranted, namely cohort studies with long follow up monitoring since birth.

Immunology Wheezing Rhinitis

## Footnotes

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