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#### TITLE

**EPIDEMIOLOGICAL CHARACTERIZATION AND TEMPORAL TRENDS OF SCHISTOSOMIASIS MANSONI IN THE NORTHEAST REGION OF BRAZIL: ANALYSIS OF A DECADE**

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#### ABSTRACT

**Introduction:** Among the six species of *Schistosoma* known to cause disease in humans, *Schistosoma mansoni* is the only one present in Brazil, responsible for infections in 19 out of the country's 26 states. **Objective:** To analyze the epidemiological characteristics, prevalence, and temporal trends of schistosomiasis mansoni in the Northeast region from 2012 to 2023. **Methods:** Data for this study were obtained from the Notifiable Diseases Information System (SINAN). We considered the nine states in the Northeast region that had reported cases during the study period. Epidemiological characteristics such as gender and age group were analyzed using descriptive analysis and Relative Risk (RR). Furthermore, a temporal trend analysis was conducted using a log-linear regression model with the Joinpoint program. All statistical analyses were performed with a 95% Confidence Interval (CI), and results were considered significant when  $p \leq 0.05$ . **Results:** During the study period, 12,420 cases of schistosomiasis were reported in the Northeast region of Brazil. The three states with the highest number of cases were Bahia, with 5,683 cases (46.43%); Pernambuco, with 2,657 cases (27.71%); and Paraíba, with 994 cases (8.12%). Regarding gender, males accounted for the highest number of reported cases (N = 6,847; 55.13%), with a higher Relative Risk (RR) of 1.289 (95% CI: 1.244 to 1.335) for disease occurrence. The most affected age group was 40 to 69 years, with 5,379 cases (43.31%). However, the age group with the highest risk was individuals over 70 years (RR = 5.901; 95% CI: 5.358 to 6.499). In terms of temporal trends, both Pernambuco, from 2012 to 2023 (AAPC = -7.5; 95% CI = -11.5 to -3.4;  $p = 0.001$ ), and Bahia, from 2014 to 2023 (APC = -19.9; 95% CI = -28.2 to -10.7;  $p = 0.006$ ), showed decreasing trends. Conversely, the state of Piauí exhibited an increasing temporal trend (APC = 31.0; 95% CI = 5.3 to 63.0;  $p = 0.001$ ) between 2016 and 2023. **Conclusion:** Our data demonstrate that Pernambuco is one of the most affected states by schistosomiasis in the Northeast, although temporal trends show a decrease in prevalence rates over the years. In terms of epidemiological characteristics, men and individuals aged 40 to 69 are at a higher risk of contracting the disease. These findings highlight the profile of individuals most affected by schistosomiasis, which may reflect occupational or labor activities of people living in endemic areas for the disease.

#### KEYWORDS

Time Series; *Schistosoma mansoni*; Epidemiology; Public Health.

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