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TITLE

SPATIAL DISTRIBUTION OF SCHISTOSOMIASIS IN AN ENDEMIC MUNICIPALITY IN PERNAMBUCO

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ABSTRACT

Introduction: Jaboatão dos Guararapes is located in the metropolitan region of Recife and has the second-largest population in the state of Pernambuco, with about 630,000 inhabitants. It covers an area of 258.724 km², comprising both urban and rural zones. Due to its spatial characteristics and demographic density, understanding the geographical aspects of public health events adds more quality to the analysis of information. In this sense, spatial distribution involves a set of techniques used for the manipulation of spatial information aimed at conducting studies, planning, and decision-making in various areas, including public health.

Objective: To use spatial distribution as a tool for planning and management in public health.

Method: For georeferenced visualization, the QGis program was used with data available in the SISPCE from patients residing in the municipality who tested positive for schistosomiasis.

Result: From 2022 to 2024, it was observed that the disease was present in all seven health regions.

The highest number of parasitological exams was conducted in Region V (Prazeres and Cajueiro Seco), followed by Region VI (Candeias, Piedade, and Barra de Jangada). Region VI had the highest number of positive cases, particularly in the Barra de Jangada neighborhood, where the Nautical Lagoon is located.

Discussion: Georeferencing assists managers and health teams by exposing epidemiological data that contribute to the planning of health actions. Additionally, the combination of geoprocessing with monitoring tools provides a more specific understanding of spatial patterns and trends, facilitating the implementation of more effective and sustainable policies and actions. Regarding epidemiological surveillance, the use of geospatial data helps identify high-risk areas and patterns of spread, allowing spatial analysis of disease outbreaks and facilitating the identification of infection sources and transmission routes. In terms of health management, maps can be used to develop predictive models that estimate the risk of disease outbreaks based on environmental and climatic factors, allowing the simulation of different intervention scenarios, as well as evaluating the effectiveness of disease control and prevention measures. As a limitation of this type of study, the quality and reliability of the data, the lack of structured municipal geographic information systems, the absence of digital cartographic bases, and official address records, especially in underserved areas such as informal settlements, stand out.

Conclusion: Geoprocessing is essential to face current and future challenges in public health, as it allows for a more efficient approach to managing health problems, contributing to the prevention of diseases and outbreaks, better allocation of resources, and rapid responses to emergencies.

KEYWORDS

Spatial Distribution; Schistosomiasis; Epidemiology

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