## Vulnerability Analysis of Anemia in Peruvian Departments: A Temporal Comparison

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## Highlights

- Evaluate regional vulnerability to anaemia in children Peruvian departments
- Incorporate a temporal analysis using two distinct points in time
- Investigation of the drivers behind reduced vulnerability in certain departments and the challenges contributing to increased vulnerability in others

## ABSTRACT

Anemia is a significant public health concern, particularly among children aged 6 to 35 months, due to its adverse effects on cognitive development, physical growth, and overall well-being. This condition exhibits marked regional disparities across Peruvian departments, highlighting the need for systematic and targeted interventions. Building upon prior research, this study employs the Analytic Hierarchy Process to assess anemia vulnerability, integrating sociodemographic and healthcare data into the framework. By comparing two points in time, the study identifies shifts in vulnerability indices, examining the factors contributing to improvements in some departments and the challenges driving increased vulnerability in others. The analysis seeks to uncover effective interventions implemented in regions with positive outcomes and to understand the barriers hindering progress in departments with worsening conditions. By structuring complex decisionmaking processes into a hierarchical framework, the AHP approach allows for the synthesis of multiple criteria to calculate updated vulnerability indices. These findings are visualized through enhanced vulnerability maps, providing a comprehensive view of the regional landscape. This approach aims to facilitate evidence-based policymaking and the design of targeted strategies to reduce anemia prevalence, improve access to prenatal and child healthcare, and ultimately enhance health outcomes for vulnerable populations in Peru.

Keywords (3-6): Anemia, Vulnerability, Perú, Analytic Hierarchy Process.

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