Prevalence of anemia and its relation with malaria among children under five years in Kenya: An analysis using Kenya Malaria Indicator Survey and Earth observation satellite data

by

Saki Ashikawa

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Supervisor: Emilie Takahashi

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Abstract

Background:

Anemia is a major public health concern in the world, mainly affecting children and women. Kenya had an especially high prevalence of 42.8% in children in 2019. The present study aims to identify the risk factors associated with anemia in children under five years of age in Kenya to provide evidence-based data that will contribute to reducing anemia.

Methods:

This was a cross-sectional study conducted using the 2020 Kenya Demographic and Health Survey. The prevalence of anemia among children under five years of age was examined, and multiple regression was conducted to identify the factors associated with anemia.

Results: Among 4,345 children under five years of age, overall prevalence of anemia was 52.4%. Standardized partial regression coefficients identified three variables. The association of "result of malaria rapid test," "land surface temperature (LST)" and "wealth index" to "anemia level" was 0.1 ($p < .01$), 0.75 ($p < .01$), and -1.68 ($p < .01$), respectively.

Conclusion:

The present findings indicate that anemia in children under five years of age in Kenya is associated with malaria, LST, and wealth index. Hence, it is crucial that, in addition to anemia control, this targeted approach to anemia focuses on malaria prevalence, high LST areas and that it specifically targets low wealth index households.

Keywords: anemia, malaria, earth observation satellite data, LST, Kenya