

Nutrition News for Africa

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An article entitled “Risk factors for moderate to severe anemia among children in Benin and Mali : Insights from a multilevel analysis” was published by Ismael Ngnie-Teta, et al. in the Food and Nutrition Bulletin 2007;28 (1): 76-89

Introduction:

Anemia represents a major public health problem among infants in poor countries. Moderate and severe anemia are associated with increased child morbidity and mortality and a deterioration of the physical and cognitive development of children. Iron deficiency remains the main cause of anemia in poor countries and contributes to almost half of the current cases. Disease, and malaria in particular, are important risk factors in endemic malarial settings typical of Africa . This study is aimed at providing more light on the impact of household and community socioeconomic determinants and the interrelationship between such contextual and individual factors. The study attempted to separate individual and household factors from contextual factors associated with moderate and severe anemia in children in Benin and Mali .

Methods:

Data used in this study were gathered from DHS carried out in 2001 in Benin and Mali . Anemia was defined through blood hemoglobin levels in capillary blood. Moderate to severe anemia was defined as hemoglobin lower than 9.9 g/dL and mild anemia as hemoglobin between 10.0 and 10.9 g/dL. The following child characteristics were studied: age; sex, mother’s age, height-for-age z-score recent diarrhea episodes and immunization. Studied household characteristics included: source of drinking water; mother’s education; father’s education, household size, and household wealth index.

Results:

The prevalence of anemia among children was high and comparable in the two countries: (82% and 83% in Benin and Mali , respectively). Moderate anemia (hemoglobin between 7.0 and 9.9 g/dL) affected 52% of Beninese children and 53% of Malian children. Severe anemia (hemoglobin < 7.0 g/dL) affected 9% of Beninese children and 12% of Malian children. The prevalence of anemia is mostly attributable to differences between individuals (more than 80%) rather than to differences between communities. The risk of anemia was 3 to 4 times higher among children under 3 years of age than among those between 4 and 5 years of age. The risk of anemia was higher among stunted children and children who have had recent episodes of diarrhea. Beninese children with incomplete immunization and children who did not sleep under a bednet were also at higher risk for moderate to severe anemia. Mother’s education was positively and significantly associated with moderate to severe anemia in Benin but not in Mali . Living in a rural area was associated with a higher prevalence of anemia in Mali but not in Benin.

Discussion:

Risk factors for moderate to severe anemia vary throughout Benin and Mali , but the variability occurs at the individual level; there is little community-level clustering. Therefore, anemia interventions need not be community-specific. Successful programs to adequately address anemia should include a focus on overall child health indicators as identified in this study. These include reducing infections, especially reducing malaria through bednet use, reducing protein– energy malnutrition, and improving immunization.

