



Risk Factors for Anemia in Non-pregnant Women across the Agroecological Zones of Nepal

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ABSTRACT

Objectives: Describe the prevalence of anemia in Nepali non-pregnant women of reproductive age by agroecological zone and potential risk factors.

Methods: We randomly sampled 21 Village Development Committees, each with 3 wards, proportionate to size across the mountains, hills and terai. In 4509 households with children <5 years or newlyweds we assessed anthropometry, 7-day diet frequency, morbidity, participation in health services and altitude-adjusted hemoglobin measurement (n=887). Household SES and empowerment questions were asked. Regression analyses were used to evaluate risk factors of anemia.

Results: Anemia affected 53.3% of all women, and 42.3%, 35.8% and 66.1% in the mountains, hills and terai, respectively. Lowest vs. higher castes in the terai were at higher risk of anemia (OR=1.58, CI: 1.04-2.40). A secondary education (6-9 years) and overweightness (BMI > 24.9) appeared protective against anemia (OR=0.59, CI: 0.39-0.90 and OR=0.49, CI: 0.27-0.90, respectively). Women who accessed skilled health care workers in the past year had an increased risk of anemia (OR=1.36, CI: 0.99-1.85), likely reflecting their illness. Knowledge of deworming and

iron-folic acid supplementation, SES and diversity of recent diet were unrelated to anemia risk.

Conclusions: Approximately half of women of reproductive age have anemia in Nepal, with the highest risk in the terai. Anemia was less likely in educated, higher caste and better nourished women. Lack of association with recent diet may reflect inadequate duration of assessment with 7-day frequencies or causes of anemia other than iron deficiency. Health care providers are more likely to see anemic women, representing an opportunity to screen and treat anemia.

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