PREVALENCE OF INADEQUATE MICRONUTRIENT INTAKE AMONG WOMEN OF REPRODUCTIVE AGE IN MBEYA REGION, TANZANIA

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BACKGROUND/OBJECTIVE

The Tanzania Food and Nutrition Center (TFNC) carried out research studies in Mbeya Region, Tanzania to inform the Improving Maternal and Adolescents Nutrition (IMAN) project.

One component of the IMAN project was a trial integrating multiple micronutrient supplements and nutrition interventions into an existing maternal, neonatal, and child health program. To inform the trial, TFNC conducted a dietary assessment study among of pregnant and lactating women.

Objective: Assess micronutrient intake and the prevalence of inadequate intake among non-pregnant, non-lactating women of reproductive age (WRA; 15–49 years).

METHODS

STUDY DESIGN & SAMPLE

- Cross-sectional survey in Mbeya Region in July 2022 (N=500), using multi-stage cluster randomized sampling.
- Data collection involved multiple-pass 24-hour recalls for dietary intake data and a household module for demographic data.
- Repeat 24-hour recalls were obtained from a subsample of participants 3–10 days after the baseline interview (n=120).

Table 1. Demographic Characteristics of Study Sample

Characteristic	Full Sample (N=500)	Subset of Repeat Recalls (n=120)
Mean, years (SD)	32.38 (9.95)	33.28 (10.43)
Age group, N (%)		
15–19	63 (12.6)	17 (14.2)
20–29	143 (28.6)	28 (23.3)
30–39	146 (29.2)	33 (27.5)
40–49	148 (29.6)	42 (35.0)
Education level, N (%)		
Primary or less	322 (64.4)	79 (65.8)
Secondary school	108 (21.6)	25 (20.8)
Higher education	21 (4.2)	5 (4.2)
Missing	49 (9.8)	11 (9.2)
Residence, N (%)		
Rural	318 (63.6)	78 (65.0)
Urban	182 (36.4)	42 (35.0)

DATA ANALYSIS

- We linked the 24-hour recall data to the Tanzanian Food Composition Table to calculate the nutrient content of foods consumed.
- We then used the National Cancer Institute (NCI) method to estimate usual nutrient intakes and to calculate the prevalence of inadequate intake in the study population (i.e., the % of the study sample that did not meet age- and sex-based harmonized average nutrient values [H-ARs]).

RESULTS

Prevalence of inadequate intake (% below H-AR) was—

- >90 percent for vitamins C and E, riboflavin, iron, and zinc
- More than two thirds for vitamin A (78.2 percent), vitamin B12 (82.0 percent), niacin (68.3 percent), and thiamin (72.0 percent)
- Slightly over half for vitamin B6 (52.7 percent) and folate (53.9 percent)
- Only 4.9 percent for copper

There were no differences in the prevalence of inadequate intake by demographic subgroup (age, education, or rural-/urban-residence).

Figure 1. Prevalence of Inadequate Intake for 11 Key Micronutrients among WRA in Mbeya Region, Tanzania (N=500)

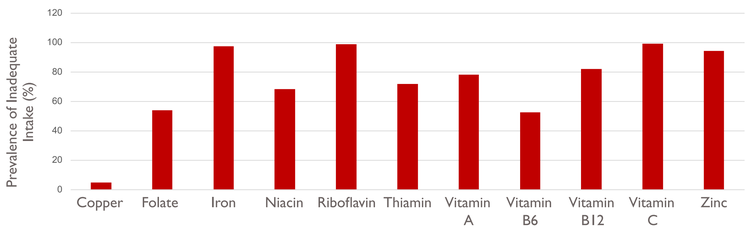
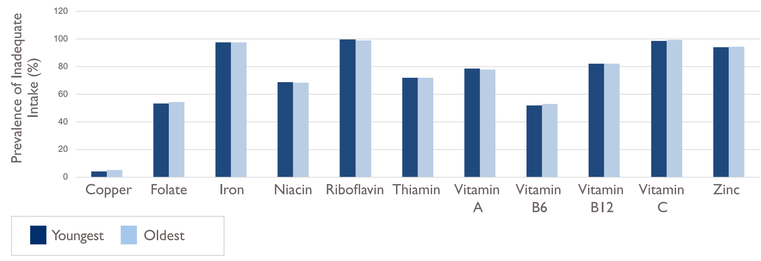
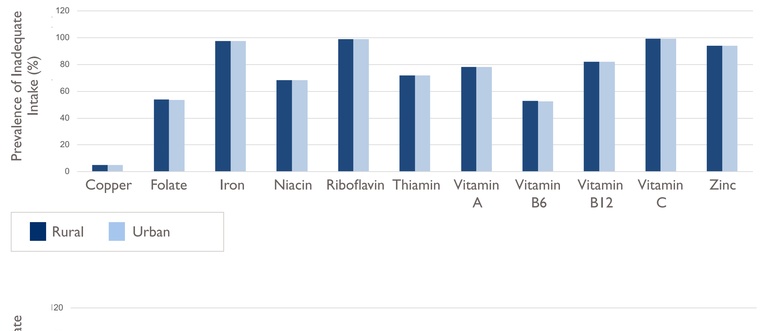
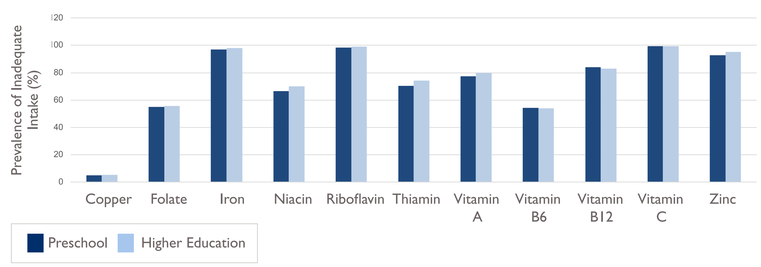


Figure 2. Prevalence of Inadequate Intake for 11 Key Micronutrients by Demographic Subgroups among WRA in Mbeya Region, Tanzania (N=500)







CONCLUSIONS/FINDINGS

This study will help guide nutrition programs to improve interventions to address micronutrient inadequacy in the area.

- Inadequate consumption of 11 key micronutrients is highly prevalent among WRA in Mbeya Region, Tanzania.
- Nearly all women in the study population would benefit from increased consumption of vitamins C and E, riboflavin, iron, and zinc.

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