

INTRODUCTION: Child malnutrition is a major public health concern in low- and middle-income countries, particularly among children under five years old.

OBJECTIVES: This study examines factors influencing the nutritional status of children under five enrolled in the Maternal and Child Nutritional Follow-up Programme (PANMI).

METHODOLOGY: A retrospective longitudinal study was conducted on 260 children (0–59 months) in São Tomé and Príncipe, followed by PANMI from 2021 to 2023. Data included child characteristics (sex, age, residence, birth weight, anthropometrics, and feeding practices) and maternal/socioeconomic factors (age, education, employment, income, siblings, twin status, daycare attendance, orphanhood, and alcohol consumption). Nutritional status was assessed using WHO Anthro software, classifying underweight, wasting, and stunting as present when z-scores were < -2 and normal when ≥ -2 .

RESULTS: Underweight (30.9%; $p=0.009$) and stunting (33.3%; $p=0.014$) were most prevalent in children aged 13–25 months, while wasting peaked at 7–12 months (34.5%; $p=0.007$). Urban areas had higher underweight ($p=0.027$) and stunting ($p=0.002$) prevalence. Low birth weight (LBW) was strongly associated with underweight (78.6%; $p<0.001$) and stunting (61.2%; $p<0.001$). Exclusive breastfeeding (60.4%) and weaning at 6–24 months (82.0%) were common. Longer PANMI follow-up improved nutritional outcomes. Wasting (8.3%; $p=0.008$) and stunting (16.2%; $p=0.017$) were more frequent in twins. Having 1–2 siblings increased stunting risk ($p=0.001$). Underweight (6.3%; $p=0.046$) and stunting (10.5%; $p=0.038$) were higher among children of alcoholic mothers, while wasting was prevalent in those of non-working mothers (69.1%; $p=0.013$).

CONCLUSIONS: Key risk factors for malnutrition included LBW, younger age, urban residence, twin status, fewer siblings, orphanhood, maternal alcohol consumption, and unemployment. Exclusive breastfeeding and weaning at 6–24 months also influenced nutritional status. Longer PANMI follow-up was linked to reduced underweight and wasting, reinforcing its role in improving child nutrition.

CO14. DOES IRON AND B12 SUPPLEMENTATION PLAY A ROLE IN DIET-INDUCED CHANGES IN MUSCLE MASS? – FINDINGS FROM THE VEGGIENUTRI CROSS-SECTIONAL STUDY

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INTRODUCTION: In Portugal, lack of information regarding vegetarian populations and difficult access to nutritional counselling may exacerbate the risks of poorly planned plant-based diets.

OBJECTIVES: To study body composition differences between vegetarian and omnivorous adults, and to identify putative underlying nutritional and health parameters.

METHODOLOGY: 425 omnivorous (OMNI), lacto-ovo-vegetarian (LOV) or vegan (VEG) adults living in Portugal free of any chronic disease were included. Participants answered a food frequency and a sociodemographic and lifestyle questionnaire. Bioelectric impedance analysis was performed, and fasting blood samples were collected for health biomarkers analysis.

RESULTS: Total protein intake was significantly lower for stricter vegetarian habits (median (P25; P75) in g/day: 98.6 (79.5; 123.1), 90.4 (65.9; 121.0), and 87.6 (59.8; 118.5) for OMNI, LOV and VEG, respectively; $p = 0.020$). Compared to being OMNI, being LOV, but not VEG, was independently associated with having +4.8 % ($p = 0.002$) fat mass and –2.2 % ($p = 0.043$) muscle mass (model adjusted for sex, age, marital status, physical exercise, multivitamin supplement intake and nutritional counselling). On the other hand, isolated B12 supplements were most used by VEG (93% in VEG vs. 17% in OMNI and 59% in LOV, $p = 0.001$), while isolated iron supplements were most used by LOV (29% in LOV vs. 14% in OMNI and 13% in VEG, $p = 0.042$). Among VEG, B12 blood levels correlated negatively with blood homocysteine ($r_s = -0.386$, $p < 0.001$) and positively with % muscle mass ($r_s = 0.136$, $p = 0.005$) and iron supplement users presented higher C-reactive protein ($p = 0.014$) and lower % muscle mass ($p = 0.003$), when compared to non-users.

CONCLUSIONS: Our data suggest that among VEG, B12 supplementation may rescue from low-protein-induced muscle mass loss, while among LOV, iron-related inflammation may exacerbate it.

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CO15. LATER DAILY EATING IS ASSOCIATED WITH POORER WEIGHT LOSS OUTCOMES IN PATIENTS LIVING WITH SEVERE OBESITY FOLLOWING BARIATRIC SURGERY

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