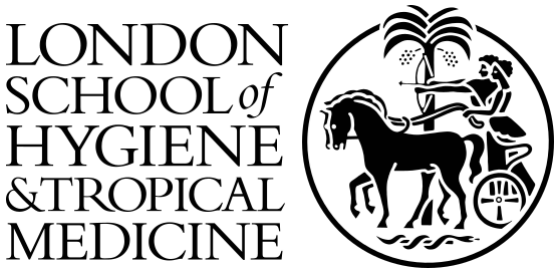

High Consumption of Unhealthy Snack Foods/beverages Is Associated with Lower Length-for-age Z-scores Among Children 12–23 Months in Kathmandu Valley, Nepal (P11-092-19)

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Objectives: Consumption of unhealthy snack foods and beverages (USFB) among young children in low- and middle-income countries (LMIC) is rising, however, little is known about their effect on nutritional outcomes during the complementary feeding period. This study aimed to assess the association of high versus low USFB consumption on the iron status and growth of 12–23 month old children living in Kathmandu Valley, Nepal.

Methods: A cross-sectional survey was conducted from February – April 2017 among a representative sample of 12–23 month old children and their caregivers (n = 745). Dietary (interactive 4-pass 24 hour recalls) and anthropometric measurements and capillary blood samples were collected to estimate dietary intakes of energy and nutrients, Z-scores for length-for-age (LAZ) and weight-for-length (WLZ), and indices of iron status. Percentages of dietary energy intakes (%TEI) from USFB (defined using the United Kingdom's Food Standard Agency's nutrient profiling model) were calculated. LAZ, WLZ, hemoglobin (Hb), serum ferritin (SF), and transferrin receptor (TR) concentrations of children classified into the lowest versus the highest terciles of %TEI from USFB were compared using multivariable linear regression analyses after adjustment for covariates that influence nutrition.

Results: Ninety-one % of all children had consumed a USFB in the previous day. On average, 46.9% TEI came from USFB among the highest tercile consumers, compared to 5.2% TEI among the lowest. Nineteen % of children (n = 138) were stunted (LAZ < –2), 5.2% (n = 38) were wasted (WLZ < -2), while only four children were overweight/obese (WHZ > 2). Thirty-eight % of children (n = 257) were anemic and 28.7% (n = 193) had iron deficiency anemia. In the adjusted model, mean LAZ was nearly 0.3SD lower among high USFB consumers than low consumers ($P = 0.003$). No associations were found with WLZ or biochemical concentrations.

Conclusions: In this LMIC context, urban 1–2 year old children who were high USFB consumers were significantly shorter compared to those who were low USFB consumers. To safeguard child nutrition in LMIC, policies and programs many need to address the increasing access and use of inexpensive, nutrient-poor USFB.

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