

Nutritional status and dietary patterns of a nationally representative sample of attending school Bolivian adolescents

by

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Objective: To describe nutritional status and dietary patterns of a nationally representative sample of Bolivian adolescents

Design and setting: Cross-sectional study

Setting: Bolivia, September 2005 to June 2007. Data from 34 clusters randomly selected by population proportions from the 327 counties school districts lists.

Subjects and methods: 3445 adolescents (age 12 - 18 y, mean age 15.5y SD 1.8) attending public and private schools from urban and rural areas completed a food-frequency and socio-demographic questionnaire, and underwent anthropometric measurements by trained personnel. BMI was calculated from measured heights and weights. The Bolivian Adolescents Percentiles Reference (BAP) was used for nutritional classification. Bolivia, September 2005 to June 2007. Data from 34 clusters randomly selected by population proportions from the 327 counties school districts lists.

Results: Incomplete questionnaires for BMI-for age data, under-reporters (EI: BMR \leq 0.92) and over-reporters (EI: BMR \geq 2.4) were removed (2.7%, 23.6% and 18.2 % respectively). Data of 1836 adolescents' were analyzed (45.6%boys, 54.4% girls). The majority of respondents had healthy weight (83.6%), 8.3% were overweight, 4.5% obese and 3.6% underweight. Mean daily consumption of major food groups were 260g of cereal and derived products, 156g meat and derived, 10g fish and seafood, 205g milk and dairy, 21g eggs, 265g fruits, 208g tubers, 31g sugar and sugar products, and 234g vegetables and pulses. Boys consumed more cereal and cereal products ($p < 0.001$) and milk and dairy products ($p = 0.029$) than girls, while the latter ate more vegetables and pulses ($p < 0.001$). No gender differences were observed in other food groups. Adolescents from urban schools consumed higher quantities of meats and dairy products ($p < 0.001$). Adolescents from rural schools ate more

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eggs, tubers and roots ($p<0.001$) than their urban counterparts. Private schools' adolescents consumed more milk and dairy products and fruits ($p<0.001$) than those from public schools. Tubers and roots, vegetables and pulses ($p<0.001$) consumption was higher in public schools.

Conclusions: This nationally representative study highlights socio-demographic disparities in food intake patterns of Bolivian adolescents.