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Complementary Foods in Southwest Ethiopia: Diversity, Composition and Nutrient Adequacy

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Abstract

At the age of six months and above, breast milk is no longer sufficient to meet nutritional needs of the growing infant. Nutritious complementary foods are therefore introduced. Understanding the diversity, nutritional composition, and nutrient adequacy of diets of young children is important in judging the adequacy of their diet, which was examined in this study. In this community-based cross-sectional study, a stratified multistage sampling procedure was used to sample 403 children, 6–23 months old, in Southwest Ethiopia. Data were collected using a semi-structured questionnaire. the dietary diversity score (DDS) was calculated as the count of food groups consumed in the 24 hours prior to the assessment among seven food groups. Six complementary foods predominantly fed to children were assayed for proximate composition, energy, mineral density, tannin and phytate content using standard methods. Nutrient adequacy ratio (NAR) was calculated as the intake of a nutrient (per day) divided by the recommended intake of the nutrient. Only 16.1 % of the children got the minimum dietary diversity. The children were reported to be fed with cereals & grains (68.8 %), discretionary calories (53.6 %), protein-rich foods (44.6 %), oils and fat (40.5 %), vegetables (38.5 %), fruits (28.1 %) and dairy products (17.9 %). The proximate composition and calorific value of the sampled foods ranged between 58.4–79.6 %, 8.2–11.9 %, 0.9–8.5 %, 2.3–8.2 %, 2.9–8.0 %, and 4.3–24.4 %, 27.9–162.6 Kcal/100 g for moisture, protein, crude fat, crude fibre, total ash, total carbohydrate and energy content, respectively. The mineral contents ranged between 22.5–42.4 mg/100 g, 1.8–4.1 mg/100 g, and 168.4–250.4 mg/100 g, 225.6–317.0 mg/100 g for iron, zinc, calcium and phosphorus, respectively. The phytate and tannin contents ranged from below detectable level (BDL)-117.7 mg/100 g and 1.2–75.2 mg/100 g, respectively. All the complementary food samples predominantly fed to children were not sufficient to meet the protein, fat, carbohydrate, energy and calcium requirements, (NAR<1). However, most of the diets provided adequate iron and zinc. The nutrient density and diversity of complementary foods of 6–23 months old children in the study area were found to be sub-optimal. Upgrading the nutritional composition of the predominantly starchy complementary foods should be of highest priority in order to improve the nutrition of infants and young children.

Keywords: Complementary foods, dietary diversity, nutritional composition

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