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Role of Fruits for Addressing Micronutrient Needs of Children and Mothers/caregivers: Case Study of Three Counties in Kenya

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Abstract

Micronutrient deficiencies among women and children in Kenya are highly prevalent in part, due to sub-optimal intake of micronutrients in their diets. Fruits provide a variety of micronutrients required for good health, growth and development of individuals. This study comprised of 439 children aged 6–59 months and their mothers/caregivers randomly sampled from villages in Tharaka-nithi, Kitui and Kwale Counties, Kenya. A structured questionnaire was used to collect data on household food production and Months of Adequate Household Food Provisioning (MAHFP) and 24-hour dietary recall questionnaires were used to assess food and nutrient intake of mothers/caregivers and children. The mean MAHFP was nine in 12 months. The mean land size for households was 0.96 hectares; 95 %, 77 % and 63 % of the households cultivated staples/pulses, vegetables and fruits respectively. The main crops cultivated were maize, beans and green grams, vegetables; cowpea leaves, amaranth and kale while the fruits were mango, banana, guava and pawpaw (some of these fruits were harvested year-round). The median intake of micronutrients such as vitamin A, C, folate, calcium, iron and zinc for caregivers and children was below the Recommended Daily Allowance (RDA). Less than a quarter of the mothers/caregivers met their RDA for the above nutrients while more than half of the children met their RDA for vitamin C (55 %) and zinc (63 %,) while only 31 %, 24 % and 17 % achieved their RDA for folate, vitamin A and iron respectively. The proportion of caregivers who achieved their RDA for vitamin C and A was significantly higher among households that cultivate fruits than those that do not (23.2 % Vs 2.5 % $p = 0.000$ and 10.9 % Vs 4.9 $p = 0.032$). This was similar among children who achieved their RDA for vitamin C (61.6 % Vs 42.9 % $p = 0.000$) and vitamin A (27.5 % Vs, 17.2 % $p = 0.014$). There is inadequate intake of essential micronutrients among children and caregivers in these counties; this puts them at risk of high morbidity and mortality. Promoting increased fruit production of a diversity of species rich in key micronutrients such as vitamin A and C and are seasonally available year-round; and increased consumption amongst these communities could contribute to better micronutrient intake.

Keywords: Food production, fruit production, micronutrient deficiencies, Recommended Daily Allowance

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