

Nutritional status and dietary fatty acid intake among children from low-income households in Sabah: A cross-sectional study

ABSTRACT

Objectives: This study aimed to assess the nutritional status and dietary fatty acid intake among children from low-income households in Sabah, Malaysia. **Methods:** This cross-sectional study was conducted from December 2022 to February 2023 in Kota Kinabalu and Tawau. A total of 182 children aged 5–12 years from low-income households (less than RM 4850 per month) were recruited. Anthropometric measurements included body weight, height, and body mass index. Dietary intakes were assessed using a 24-h diet recall and the fatty acid (FA) intakes were analyzed using a database with FA content for local foods. **Results:** The mean age of children was 8.8 ± 1.8 years, with a majority being girls (53.8%) and of Bajau ethnicity (53.3%). Based on the anthropometric measurements, 16.5% of children were stunted, 7.1% were thin, and 21.4% were overweight or obese. Intakes of total fat, saturated fatty acids (SFA), monounsaturated fatty acids (MUFA), polyunsaturated fatty acids (PUFA), and trans fatty acids as a percentage of total energy were 29.3%, 12.3%, 12.6%, 4.0%, and 0.05%, respectively. 77.5% of children exceeded the recommendation for SFA and 63.2% of children did not meet the recommendation for n-3 PUFA. All children did not meet the recommendation for α -linolenic. Children from Tawau had greater consumption of n-3 PUFA ($p < 0.001$) while children from Kota Kinabalu had greater intakes of total fat ($p = 0.020$), MUFA ($p = 0.005$), n-6 PUFA ($p = 0.015$), and trans fatty acid ($p = 0.001$). None of the dietary fatty acids was associated with anthropometric indices. **Conclusions:** There was a high prevalence of stunting and overweight or obesity among children from low-income households in Sabah. Most of the children failed to meet the recommendations for SFA and n-3 PUFAs. These findings indicate a compelling need for the implementation of nutritional strategies to enhance adherence to dietary recommendations for fatty acids.