VALIDITY AND RELIABILITY OF A FOOD FREQUENCY QUESTIONNAIRE AMONG LEBANESE CHILDREN FOR THE ASSESSMENT OF ENERGY AND NUTRIENT INTAKE

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Introduction In order to evaluate the diet-disease association, valid dietary assessment tools that accurately assess nutritional intake are critical. Childhood is a critical window for intervention to delineate the risk of many nutrition-related diseases later in life. Limited validated tools exist to assess dietary intake in children aged less than 10 years in the Middle East and North Africa Region and in Lebanon.

Objectives The main objectives of this study were to develop and validate a Food Frequency Questionnaire (FFQ) to assess dietary intake among Lebanese children aged 5–10 years.

Methods Children were recruited from public and private schools in the Lebanese capital Beirut. Mothers (used as proxy) completed the FFQ (FFQ-1) in the first visit. During the following 4 weeks, 4 Multiple Pass 24 hour recalls (MPRs) were collected. At Week 4, the FFQ (FFQ-2) was completed a second time. Validity tested the developed FFQ against the mean of the MPRs. It was assessed by spearman correlation coefficients and Bland Altman plots. The Intraclass Correlation Coefficient (ICC) and kappa statistic were used to test reliability between FFQ-1 and FFQ-2.

Results 120 children completed the study. Spearman correlation coefficients for energy, protein and total fat intakes were 0.60, 0.40 and 0.60, respectively. Other nutrients’ coefficients ranged between 0.20–0.65. Bland-Altman’s Limits of Agreement showed acceptable agreement.

ICCs for energy, protein and total fat intakes were 0.87, 0.85 and 0.85, respectively. Other nutrients’ ICC ranged between 0.18–0.90. The kappa coefficients between FFQ-1 and FFQ-2 ranged between substantial and moderate agreement.

Conclusions This study’s findings indicated that the developed FFQ is valid and reliable among Lebanese children aged 5–10 years. This validated questionnaire will be a useful tool for assessing Lebanese children’s dietary intakes. It will also be an asset that other researchers in the region can use or adapt to suit their study populations.