

Development and Validation of a Semi-Quantitative Food Frequency Questionnaire for Sabah's MultiEthnic Specific Dietary Practices

ABSTRACT

Assessing dietary practices is valuable in public health research. Longterm habitual food intake is often the study of interest, and a food frequency questionnaire (FFQ) is considered as the most appropriate method in this case. This study aimed to develop and assess the construct validity and reliability of a semi-quantitative FFQ. A total of 50 adults participated in the development of the FFQ, with 30 participants took part in the validity and reliability study. The FFQ consisting of 137 food items from 13 food groups was compared with a two-day dietary record (2DR) as the reference method. The reliability of the FFQ was assessed by repeated administration of the questionnaire (FFQ2). Validation study demonstrated fair acceptance of the FFQ. Mean intake of energy in FFQ and 2DR correlated well, with the mean intake of energy, carbohydrates and protein tend to be higher in FFQ. Bland Altman plot and linear regression model demonstrated fairly good agreement for both energy and fat intake between FFQ and 2DR. Reliability of the FFQ assessed with intraclass correlation coefficients (ICC) showed excellent reliability (ICC=0.982, 95% CI=0.963-0.992), with strong correlation of mean food frequency intake between FFQ1 and FFQ2, and a higher mean of intake frequency in FFQ1. Cronbach's alpha demonstrated excellent internal consistency of the 170 items with $\alpha=.945$. The FFQ has an excellent reliability and acceptable validity for measuring the average intake of energy and macronutrients among adults in Sabah.