A VALIDATION STUDY OF A SHORT FOOD FREQUENCY QUESTIONNAIRE (FFQ) WITH SERUM CHOLESTEROL

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A validated short FFQ would be a simple and inexpensive tool to determine the effectiveness of interventions aimed at reducing dietary fat intake and lowering serum cholesterol levels. A study by Heller et al (1981) was able to detect a significant change in FFQ scores when correlated with change in serum cholesterol levels post dietary intervention, but was unable to detect a cross-sectional relationship beween these two variables.

This 26 item qualitative FFQ was developed by community nutritionists to assess fat intake and determine the effectiveness of the 'Heart at Work' worksite intervention project on the NSW Central Coast. With some minor modifications, it was also used in an intervention study involving those attending general practitioners in Sydney for serum cholesterol checks. FFQs were completed both pre- and post-intervention and in both studies there was a significant fall in cholesterol levels at follow-up assessment.

A comprehensive range of strategies to analyse dietary lipids from the FFQ was used. It was scored in 12 different ways, focussing on either the fat content or the lipogenic effect of the foods, including or excluding the four qualifying questions regarding food habits, and looking at different ways of determining portion size of each food category.

In both the `Heart at Work' and the 'GP' studies there was found to be no significant cross-sectional relationship between the FFQ scores and serum cholesterol levels. Although there was found to be a significant association between change in the scores and change in serum cholesterol levels in the 'Heart at Work' study, correlations were low. Values ranged between 0.15 and 0.19 when adjusted for age, BMI and exercise. There also seemed to be little effect on the results when using the different scoring methods.

Data were then ranked in three groups, 'low', 'medium' and 'high', for both dietary scores and serum cholesterol levels in an attempt to limit the effect of intra-individual variation in these two variables and so increase the likelihood of detecting any relationship between the two. Using the weighted kappa statistical method, again no significant association was found.

Overall, therefore, it seems that this particlar short FFQ is of little use in determing the effectiveness of an intervention aimed at decreasing fat intake and lowering serum cholesterol.

HELLER,R.F., TUNSTALL PEDOE,H.D. and ROSE,G. (1981). Preventive Medicine 10: 364.

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