Reviewer's report

Title: Reliability and Relative Validity of a Food Frequency Questionnaire to Assess Food Group Intakes in New Zealand Adolescents

Version: 1 Date: 11 July 2012

Reviewer: Kenji Wakai

Reviewer's report:

This study examined the reliability and relative validity of a food frequency questionnaire (FFQ) for New Zealand Adolescents. The non-quantitative nature of the FFQ may be of interest and the limitations of the study are well acknowledged and discussed. Several issues, however, should be considered to make the most of the data.

Major Compulsory Revisions

1. Methods, Data and statistical analysis: The quantity or gram of food consumption in the 4DFR seems not to be considered in the analysis for relative validity and only the intake frequency is taken into account. If so, it should be more clearly mentioned here. Additionally, what if the intake quantity derived from the 4DFR is included in the analysis? Although a non-quantitative FFQ is used, such analysis may attenuate the effect of intake in a very small portion, of which biological significance may be negligible.

2. Results and Table 2: In assessing the relative validity, this reviewer recommends the authors to compare the median and inter-quartile range of food intake frequency between the FFQ and the 4DFR. This will clarify the under- or over-reporting in the FFQ.

3. Discussion, page 12, lines 2–9: In the assessment of relative validity, the authors adopted the first FFQ before the 4DFR to eliminate learning effects from completion of a dietary record. How the validity is altered if the second FFQ after the 4DFR is used? This analysis would provide an informative finding because the true validity may exist between the validity estimated from the first FFQ and that from the second one.

4. Abstract, Methods, line 1: The phrase "a non-quantitative" may not be familiar to readers. Please add a more specific description such as "without portion sizes".

5. Results, Sample: Although the issue of low compliance rate is appropriately addressed in the Discussion, comparing characteristics (e.g., age, gender) between those who completed the study and those who did not may be useful to assess the extent of bias due to the dropouts.

Minor Essential Revisions
1. Results, Sample, line 5: The sum of the numbers of male participants (28) and female ones (25) does not equal the total number (52) for the reliability study.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.