Reviewer’s report

Title: The development and evaluation of the Australian Child and Adolescent Recommended Food Score: a cross-sectional study

Version: 2 Date: 25 May 2012

Reviewer: Gilly Hendrie

Reviewer’s report:

REPORT TEMPLATE

Confidential comments to editors

Nil.

Reviewer’s report

The measurement of whole of diet quality from short, accessible, low burden tools is an important emerging area of research. The scientific method of this study is appropriate however the writing style and quality of communicating the science is a weakness of this paper. If the quality of written English could be improved, this paper would provide a valuable critique of a brief dietary assessment tool to measure diet quality, of particular interest to Australian researchers or those interested in children’s diet quality. The idea, science and execution of the research is sound, but I suggest a major re-write before publication.

- Major Compulsory Revisions

The whole paper needs a major revision. I have highlighted some examples below but the structure of the argument, clarity and consistency of writing need to be addressed to improve the quality to a level expected by peer reviewed journals.

Introduction

1. The question posed by the authors is novel however the development of the background makes it difficult for the reader to clearly follow the justification. For example paragraph 1 links diet quality to disease risk, paragraph 2 describes the make up of indexes in the literature, paragraph 3 revisits disease risk. Please develop the argument more clearly.

2. "Accurate". In what way is the ACARFS going to be accurate? Do you mean valid or comparable to another method of known validity?
Method & Results
1. Large sample size is a strength of this study. The method and statistical approach taken is logical and appropriate to a validation study.
2. In the FFQ, 32 of 120 questions relate to F&V. What is the distribution of questions asked about other food groups eg extras, breads/cereal etc..
3. ACARFS is described as brief but contains 70 questions. How long did it take for participants to complete?
4. Page 7 Ln 95 onwards: The scoring criteria is difficult to read and justification of why points are awarded needs more explanation. At first glance the ACARFS scoring criteria appears to be heavily weighted towards some food groups. Is this based on recommended serves? If so, then the recommended serves should be included in a table. The relative importance of each food group and therefore the relative assigned points is not immediately clear.

Results
1. Is 25/73 considered a low diet quality score?
2. Suggest using ‘older primary school’ or something similar to describe children as international audiences may not be familiar with Year 4 and Year 6.
3. Table 5: Children scores (as a % of possible score) is lowest for protein foods, followed by grains, vegetables an dairy. Any comments or possible reasons?
4. The scoring criteria does not penalise individuals for overconsumption of any food group. This is difficult to do in a guideline based index but may explain why association with BMI was non significant (like may other guidelines scores/indexes). The index is a comparison between food intake and recommended amounts. It is not intended to be an obesity related score and therefore without a penalty system for overconsumption it is not surprising it does not correlated with BMI.
5. Please include more discussion of result relating to classification in the same quartile of nutrients (first columns Table 6).

Discussion/Conclusions
1. Page 13 Ln 243: ….only considers consumption of healthy foods….What is meant by this statement, given points are given for extra food groups?
2. Reported intake can relate to the number of questions asked about a food group. More questions, it is likely that reported intake will be greater. Page 13 Ln254: Does the level of agreement reflect the number of questions asked about food groups? ie which are the better performing nutrients, and do these nutrient relate to the questions that have more questions assigned?
3. Some repetition of results in discussion. More insight into the findings and application of the tool would be interesting.

- Minor Essential Revisions
Provided some examples, but a re-write would address many of these.
Introduction
1. Inconsistencies in writing style, spelling. For example indices vs indexes
2. Physical activity is introduced into the introduction and is not a focus of the paper or revisited later in the discussion.

Method
1. Page 5, Ln 57 & Ln 65 & Page 6, Ln 77: Consistency in spelling out of numbers >10. Usually digits are used for greater than 10.
2. Is it necessary to have the AGHE in a Table of their own? Could these be referred to and referenced instead?

Discussion/Conclusions
1. Use of numbers >10

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.