Reviewer's report

Title: Development and validity of a questionnaire to test the knowledge of primary care personnel regarding nutrition in obese adolescents

Version: 1 Date: 13 March 2013

Reviewer: Robert McKinley

Reviewer's report:

This paper describes the development of a questionnaire to assess the knowledge of primary care workers with respect to adolescent obesity, its causes and its management.

The paper has strengths: selection of items to address different dimensions, development of an item bank, piloting, item selection, assessment of reliability (internal and retest) and a measure of validity.

However there are weaknesses. Most concern the specificity with which the work is reported.

Major compulsory revisions:

• Methods Step 1: the authors do not describe how the dimensions were identified. They state that they were ‘considered important’ but not by whom. If there is evidence from the literature that they are the key domains, this should be presented, if it is a consensus opinion this should be stated together with a statement of how the consensus was gathered. It may be a consensus of the authors, if so, this should be stated and the expertise of the authors described so that the reader can judge its provenance

• Methods Step 2: I assume the 81 sentences were those described in Methods para 2: if so this should be stated. However the authors need to describe how the 42 test items were selected from the 81 candidate items.

The authors need to provide more information on the outcomes of the pilot administration: what problems were encountered and how many items were altered as a result (there may have been none but this should be stated).

• Results, Final questionnaire: More information should be given on how the 42 test items were reduced to the final 26 items. For example, were items removed because of stringency (too hard, too easy), item discrimination or reliability issues.

• Discuss why they chose to base their item stringency (difficulty) decisions on the dieticians rather than the primary care clinicians’ responses: one would normally be interested in the responses of the target population rather than a criterion population.

• Tell us whether the source questionnaire was administered in Portuguese or English.

• Discuss the wording of the questions: questions 2, 11 and 12. I personally (as a
primary care clinician) did not understand the jargon and was unsure whether
- This was a function of translation
- The scores obtained by the primary care clinicians are a function of lack of
  knowledge of the concept or understanding of the question.
- There is a broader philosophical issue which needs to be addressed and that is
  the validity of knowledge: knowledge considered core to the practice of
  specialists by specialists may not be core to generalist practice in that area of
  care. This may be driving my lack of understanding of some of the terms used in
  the items. This affects the paper in 2 ways
  - What attempts have the authors made to address the validity of the knowledge
    being assessed for primary care generalist practice: for example is an author or
    were any members of any reference groups primary care clinicians?
  - How do the authors intend to assess the validity of the content of the
    questionnaire for primary care clinicians as opposed to specialists. One approach
    could be to determine whether generalist primary care practitioners with an
    interest in adolescent obesity have higher scores that those who do not.

Minor essential revisions
- Methods para 2: neither the database from which the ‘sentences’ were drawn
  nor the ‘didactic materials and national and international guidelines’ are
  referenced. I recognise that they be numerous but if so could be presented as an
  appendix.
  The authors also do not describe how these materials were identified. Were they
  identified though a systematic review of the literature or were they already known
  to the authors?
- Methods Data Analysis: I would encourage the authors to move the mention of
  Kappa from Step 4 d to the data analysis section.
- Results Reliability: I would encourage the authors to add the alpha scores to the
  domain headings in table 3.
- I am concerned that the last paragraph of the discussion does not adequately
  discuss the questionnaire’s limitations. In the epidemiology section, item 1 is
  dependent on local epidemiology and item 2 relevant to emerging rather than
  developed economies. This should be acknowledged and the need to amend or
  replace items if it is used in a different context highlighted.

Discretionary Revisions
- Results Criterion validity Methods para 2: I would encourage the authors to use
  consistent wording and to use ‘very good’ or ‘optimal’ to describe Q4 responses.
- Submit their data to a principal components analysis. This would let them know
  whether their items load into domains or if the questionnaire is a single
  knowledge scale and hence inform their assertion in the discussion (para 4) that
  it is.
- Lastly, the authors give no indication of whether they intend to further explore
  the properties of the questionnaire or to develop it further. For example, is it
responsive to education interventions, does it inform educational interventions or does it have predictive validity.

**Level of interest:** An article of importance in its field

**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