Reviewer's report

Title: Reliability and validity of the short form household food security scale in a Caribbean community

Version: 2 Date: 12 March 2004

Reviewer: Mark Nord

Reviewer's report:

General

The research testing the U.S. survey methods for measuring household food security in Trinidad is important and of interest to researchers considering adaptation of these methods into other cultural and linguistic settings. Validation was assessed based both on internal and external associations as well as on associations among responses of multiple respondents in the same household.

The MS was much improved by the revision and I now recommend publication. I have a few further suggestions. They may be considered optional, or the editors may require them. They are very simple to implement in any case.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

1. The description of the differential item functioning test could be improved. Something like this may help clarify: "The combined data from the three ethnic groups were fitted to a one-parameter logistic model, but with separate item thresholds estimated for each ethnic group. Only the means of the item thresholds were constrained to be equal across groups. The extent to which items functioned differentially in the three ethnic groups was then assessed by the likelihood ratio (difference in twice log likelihood) between the single-group model with item thresholds constrained to be equal for all respondents and this unconstrained model.

2. In the "Results" section, when item-score correlations are first introduced, a sentence to explain them would be helpful. (Also, the hyphen is needed in item-score here and in the tables.) Something like the explanation provided in the table would be sufficient here as well, except that the meaning of "five-item scale" should be expanded. Is this a simple point biserial correlation (in which "five-item scale" would mean the raw score for the other five items)? Or is the "five-item scale" a rasch scale score calculated based on the other five items?

3. The solution proposed to the differential understanding of the "balanced meal" question (based on Derrickson) is less than ideal. If this much explanation is needed, then the word-choice in the question is poor to begin with and alternative wording based on qualitative research to find natural language used in the population of interest to describe this condition should be sought. (As an example, some Canadian researchers have used, "We couldn't afford to eat healthy meals.") The
authors might do better to omit the discussion of the new text they are testing and instead suggest that qualitative research should be conducted to identify a more appropriate descriptive for this concept based on natural language used by low-income people.

**What next?:** Accept after discretionary revisions

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

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

None