Reviewer's report

Title: Factors affecting Study Efficiency and Item Non-response in Health Surveys in Developing Countries: The Jamaica National Healthy Lifestyle Survey

Version: Date: 11 September 2006

Reviewer: Gavin Turrell

Reviewer's report:

General

-----------------------------------------------------------------------------------------------

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

The paper has the potential to make a useful contribution to the literature on item non-response (INR); and it is clearly written and well structured. I have a number of questions and comments about the paper that hopefully will serve to strengthen the work and give it broader relevance.

1. I think the Introduction should be developed a little more. In particular, why would we expect developing countries to have a different non-response profile than developed countries? Also, there is no review of previous studies of INR, so at the end of the Introduction we only have a general (vague) idea of the central focus of the paper: it is left too open-ended and no specific questions, issues, or hypotheses are posed.

2. Page 5, para 2. It is suggested that the 1993 island-wide survey would have underestimated the prevalence of many conditions. Could the authors please provide a clarifying sentence that explains why this might be the case.

3. I don’t think Figs 1-4 are needed and they could be excluded without any loss of important information. The main trends in the Figures could be readily described in a few sentences in the text.

4. I am concerned about the different response options that are combined to form the main outcome variable (i.e. no response, don’t know, and missing). If the study’s aim is to examine INR, then the inclusion of “don’t know” (which is a legitimate answer) seems inconsistent with this aim. In previous papers (e.g. Turrell 2000) a combined “don’t know/not stated” indicator was used because it was not possible to separate the two issues as the analysis was based on pre-coded secondary data. In this present paper however, it does seem possible to separate the different responses. It might be useful to undertake a sensitivity analysis by examining different combinations of the categories comprising the outcome variable. There ultimately may be no differences in the profile of people who actively refuse and those who report “don’t know” in which case this should be reported as it represents an addition to knowledge. If there are differences however, then this would raise questions about the appropriateness of combining the categories.

5. What was done with respondents who were not earning an income (probably more likely among the young and females)? How were they dealt with in the analysis? Did the income question ask for information about personal income or household income? More detail needs to be provided about these important measurement issues in the Methods (and not left to the Discussion).

6. Page 11, second paragraph. More information needs to be provided about the observer-rated measure of social status/social class that was used. In the absence of this detail it is difficult to know how to interpret the results and understand their importance.

7. Page 11, second paragraph. I don’t agree with the decision to examine the relationship between education and INR without age-adjustment. Age is likely to confound the association between education and INR and so this needs to be taken into account in the modelling (that is the whole purpose of statistical adjustment). If no age-adjustments are made, then we can’t really be confident that any association between SES and INR is due to SES per se: it might ultimately be a function of the underlying age distribution. Also, I’d be very surprised if age and SES were so strongly correlated as to result in
multi-collinearity.

8. Table 1 (and each of the other tables) need to be clearer and more informative in terms of how the data are displayed and presented. The general rule for tables is that they should be interpretable independent of the text: at present, the tables do not meet this criterion. The table headings need to be more descriptive in communicating the contents of the table, as do the column headings. Also, there is a large piece of text at the foot of Table 1 which seems misplaced.

9. Page 13, paragraph 1. How was inter-observer reliability assessed? No mention of this is made in the Methods.

10. Page 14. The Results section shouldn’t include a description of how education was measured. Text relating to the measurement of all variables should be moved to the “Measurement” section of the methods. How were urban and rural areas measured and defined?

11. Page 15: Basic Characteristics. I think this section should be placed closer to the beginning of the Results section.

12. Page 19. The greater reluctance of the young to report income might be due to the outcome variable including a “don’t know” option. Young people’s connection with paid employment might be tenuous and so many may not know how much income they earn. It is for these reasons that it might be useful to investigate the predictors of “don’t know” separately.

13. Page 21, third paragraph. Could the authors please check the accuracy of the statement “It has been shown in previous studies [31] that income non-response is greater in mail surveys…” The table in reference 31 shows that income non-response is lowest in mail surveys, and is also influenced by how the income question is asked (i.e. categories or actual amount).

14. Page 21, last sentence in paragraph 3. Whilst it is well known and accepted that item non-response is high for questions about income, this doesn’t necessitate that we forgo using income as a measure of SES or that we question its reliability and validity. Income is a widely used (and often a strongly predictive) measure of SES despite its problems; what we need to do is to use “best practice” approaches to the collection of income data to minimise non-response, and to also take into account any biases that result from item non-response when interpreting the findings. This is one of the important contributions of this present paper.

---------------------------------------------------------------------------------------------------

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

15. Replace the term “overall non-response” with “survey non-response” throughout the manuscript: the latter term is more consistent with international parlance.

16. Try not to start a sentence with a number (e.g. second sentence of the Results section of the Abstract).