Author's response to reviews

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

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Author's response to reviews: see over
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The Editor
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Dear Sir

Re: MS: 4257386711105511

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

Thank for reading and reviewing the captioned manuscript. We have taken account of the reviewers’ comments and have responded to all of them in point form below and in the revised manuscript.

We hope that the revision meets your approval and stand ready to provide any further clarification that may be required.

Yours sincerely

Rainford Wilks
Principal Investigator.
Response to Reviewers

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

Reviewer # 1

1 The reviewer refers to an “uneasy mixture of content results and results which relate to conduct, reliability and validity of the study”. Our view is that both issues are related and are important, especially as they are infrequently reported from developing countries.

2 We have included the setting in the abstract.

3 We have provided more detail on the Jamaican setting in respect of the availability of data for policy and planning and the justification for surveys in deriving these data. We have also revised the Background to make it more clear in respect of the intent of this report.

4 We have revised and shortened the Methods.

5 Results: We have provided as much detail as we can in respect of the “refusal and traditional response rate...” and regret that we do not have more information on non-responders. We have reported that overall response proportions were higher lower in the predominantly urban SERHA compared to the other regions which were predominantly rural (Table 1).

6 We have reduced the detail on response time but recognize that even though the per capita time is short, in respect of large surveys, when multiplied by the number of participants this may represent an important overall cost.

7 We believe that the regional differences are important in so far as urban/rural distribution is concerned and may be of more than just national interest.

8 We have extended our analysis of Item Non-Response to include an examination of any differences in respect of persons requiring several visits and also in respect of different categories of non-responders (“don’t know” vs “others”). We feel that this has provided additional information and insight into this important subject. Of note about 13% of respondents required 3 or more visits with 4% requiring more than 3 visits.

9 We have responded to the suggestion to highlight the rationale, generalizable issues and implications related to the sub-headings in the discussion.

10 We have revised our conclusions but hopefully have not over-extended ourselves beyond what is justified by the data.

11 We believe that Tables 1 and 2 are important in describing the setting and together respond another reviewer’s call for a schema. The Tables have been complemented to make them interpretable independent of the text.

12 We agree to delete Figures 1, 2, and 4 but feel that Figure 3 (age-sex weights) is important to the manuscript.
Reviewer # 2

General

1. Our intention in this manuscript is to describe the methodological issues which we believe to be important in surveys of this kind from countries at our stage of development. In addition, we have highlighted the issue of item-non-response because of its importance to methodology and validity of data and also because of the dearth of information on this issue, especially from developing countries.

2. The choice of a single individual versus more than person per household is always a controversial issue. Selecting a single individual has advantages including the greater likelihood that individuals from separate households are likely to represent “independent” (less correlated) data compared with those from the same household; and even this will be greater or less depending on this issue being investigated. So, for example, information on diet may be more correlated than information on taste in music within the same household (Kish 1965). We chose to err on the side of greater “independence” between respondents despite any flaw that may be introduced.

3. We agree that “non-response” as defined in our report does not represent a homogenous group. In our study we enquired about household income and we recognize that this may be more difficult to estimate between certain groups e.g. age-groups, gender, employment status. We have further analyzed the data separating “don’t know” from other non-responders and examined this group for differences. “Don’t know” represented the majority of non-responders on questions of income and family medical history but was a minority on the question of “number of sexual partners in the last year”. This probably represents a difference between genuine ignorance and reluctance to answer in the former versus the latter category of questions.

4. Our suggestion about imputation of data was in respect of income and not sexual activity. We believe that imputation of data that is not missing completely at random is a developing area of research and can be explored as an option for handling missing income data in future studies (Paik MC, , JASA1997; Locker et al, Can J Public Health 1996)

5. We have revised the sentence on sample size calculation to make it clear that we aim to estimate a population proportion and not to compare groups. We have used standard formulation which requires some prior estimate of the true proportion, the error one wishes to allow and the confidence one wishes to have in the result. In this case we would have 95% confidence that the interval (mean + 1.96SD) would include proportion.

6. We have revised the sentence to make it clear that 11/396 refers to participants and not EDs.

7. We agree that the duration of the interview per individual is small but when multiplied in large surveys this may be of some significance.

8. We have re-analyzed the data including age and education together (correlation was -.45) as predictors in multiple logistic regression models and
the independent effect of education persisted. We have adjusted Table 7 and the manuscript to reflect this.

9. We have shortened the description of the study design.

10. We have revised the introduction to provide a clearer focus to the report and highlighting the benefits of health surveys in countries like ours.

11. We have corrected the Tables.

12. There are few reports on income non-response from developing countries. Our report suggests that the proportions in developing countries may be higher than developed countries (Turrell 2000). This is worthy of further study.

13. The previous survey referred to was cited (Reference # 19). In that survey only reported occurrence of health conditions were collected and no biomedical measurements were made. This would have affected the estimates of conditions like diabetes and hypertension.

14. We believe that the Tables 1 & 2 can suffice for a flow schema
1. We have revised the introduction to give more focus to the aims of this report. Our effort to publish this paper is to document the difficulties faced when doing health surveys in developing countries. There have been several anecdotes about the “uselessness” of income data in determining social class but at the same time we recognize the important link between social class and health and the role that income may play in determining social class. This is the basis for our efforts to explore income data among others aspect of health surveys. We do not pretend to have had a priori hypothesis that developing countries had different non-response from developed countries. We do believe that to the extent that it may be different, it is interesting and requires further study.

2. We have clarified the difference between the 1993 survey and this report. In the former, only “reported” conditions were recorded, thus the prevalence of diabetes, hypertension, obesity etc would have been underestimated.

3. We agree that some of the data may be duplicated in the figures but we wish to maintain Figure 3, which shows the weights used as this is not obvious elsewhere in the report.

4. We agree that the “non-responders” do not form a homogenous group. We have re-analyzed the data and report the proportions and profile of those who responded “don’t know” versus the others.

5. Our question asked about household income. We agree that this information may not reside equally in different members of the household and this may explain some of the differences noted. In this regard unemployed persons were not handled differently in the analysis.

6. The observer-rated measure of social status is a subjective 10-point scale based on area of residence, house and household amenities and was assessed by experienced interviewers. It has not been validated but was used in previous surveys in Jamaica (Figueroa JP et al, West Ind Med J 1999). This 10-point scale was then collapsed into 3 categories which we believe will reduce errors in group classification. Subjective measures of social class have been used in other surveys Tucker CW, Social Forces 1968).

7. We have revised the analysis to take account of age in the relationship between education and income non-response. The correlation between age and education was -0.45. We had not excluded SES from models with age.

8. We have corrected the Tables to meet required standards. The text below Table 1 has been deleted.

9. Inter-observer reliability was assessed by per cent agreement on questions after training. In addition, observers were trained in the measurements of blood pressure, blood sugar and anthropometry and were certified only after they achieved reliability with the gold standard.

10. We have deleted the classification of education from the result. Urban and rural areas were defined by the Statistical Institute of Jamaica.
11. Our decision to keep Basic Characteristics where it is relates to the fact that it comes after issues of recruitment are dealt with. We believe that order is more consistent chronologically.
12. We have explored the profile of “don’t know” in comparison to other non-responders (see # 4)
13. We apologize for this error in respect of mail surveys and face-to-face surveys and income non-response. It should be noted that in the cited studies from Turrell, JECH 2000, some of the differences were small (e.g. de Leeuw, 1992).
14. We agree that income is a useful predictor of SES and we believe that studies like ours will help to refine the use of income and deserve to be published.
15. We have replaced “overall non-response” with survey non-response”
16. We have avoided starting sentences with numbers.