Reviewer’s report

Title: Paradoxical risk perception and behaviours related to Avian Flu outbreak and education campaign, Laos

Version: 3 Date: 6 August 2010

Reviewer: Armin Elbers

Reviewer’s report:

General comment: a number of critical items have been covered by the response of the authors in version 3 of the paper, but there are still some (new) items left that are serious (in my view) and need compulsory revision.

Copyediting: there are still some typographical items to be revised:

a) page 8 (section Analysis, line 10: it is either non-parametric tests were used......
or a non-parametric test was used.......... 
b) page 10, line 2: .....behaviour changes (and not behaviours changes)
c) page 11, line 24: ...duration of time and identified with ............(not identified)
d) page 11, line 24: ...take away second period after holidays.
e) Heading of Table 4: Behaviour change regarding bird flue in Laos in 2007 (and not Lao)

1. The item on the sample size is now covered in enough detail, so that is OK.

2. The response of the authors (the title of the table indicates the reference category) on the item of the reference categories in the logistic regression analysis is in my view not good enough, because it is not clear for the readers of these papers.

So my strong suggestion is that the authors put in a foot note to the table explicitly what the reference category is.

So for Table 5, in the foot note (where the authors explain the abbreviation of OR and 95% CI), with a superscript character added to the column-heading of the trained, you clear write that the trained category is the reference category.

In Table 6, you add to the heading of Odds Ratio also a superscript, that will be explained in the foot note under the table that the reference category is the category when the presumed risk factor is absent.

3. My earlier comments with respect to dealing in the text with the biases, is picked up by the authors but the improvements are weak.

4. The response of the authors to my earlier comment with respect to sensitive questions is now more clear, but it is still a bad example. By taking the example
of not reporting dead poultry, they actually say that in their study we could rely on the fact that their participants have answered always true fully. By doing that, this is not a good example to show that there might be false answers.

So better to change the sentence into: Limitations of this study include recall bias, variability between interviewers, and the possibility that participants did not answer truthfully to sensitive questions. To decrease......

5. page 8, section Analysis, line 12: I would prefer you to make the sentence like this ................., and behaviour changes regarding bird flu

6. page 8, section Analysis, line 12: regarding the analysis on factors associated with changed behaviour: changed behaviour is is a far to general term. In Table 6 it is indicated as changed behaviour in the last two months. In the text on page 10 (lines 3-5, just before start of Discussion) and referring to the results in Table 6, you talk about factors associated with cessation of poultry consumption! (and this is far more specific, but is not similar to the text in Table 6) Cessation of poultry consumption is only one of the five behaviour changes of Table 4, but it might be the most important one! However, you must indicate this (eat well cooked chicken is may be an other important one). So I would really prefer that you pick a specific behaviour change and do a multivariate analysis on it with respect to interesting factors, but do not indicate that as a general "behaviour change" because the readers of the paper would think by themselves: what behaviour change was associated with the factor?

Having said that, the results in Table 4 indicate that there are differences between urban, semi-urban and rural populations in the way they have changed behaviour.

It would therefore be logic (and necessary) to include the population categories as a confounding variable in your analysis resulting in Table 6 because e.g. the factor "owns a TV" might be differently distributed over the population categories (i.e. more TVs in the urban area than in the rural area); with that, urbanization might be a better explanatory variable than TV or vice versa. Your results will be less biased if you put in the population categories as a confounding factor in the analysis and in my view this is a necessary requirement for a good analysis.

7. Page 9, line 14 (Results section): the sentence ...Compared to 2006, participants experienced less poultry deaths in the previous 2 months. This sentence is written in between the location of Table 3 and 4, but this observation by the authors can not be found in those Tables (or other Tables).

8. Page 9, line 15-16 (Results section): Reported behaviour changes included higher rates of cessation of poultry consumption and dead poultry burial when compared to 2006 (Table 4).

If I look at Table 4, indeed I see the factor "stop eating chicken", but in this Table 4 there is no factor present that is described as "dead poultry burial", so this is not consistent!

9. Page 9, lines 24-25 (Results section): Poultry immunization was low (< 6%) in
contrast to 2006 (34.2%).

The information on low poultry immunization is not easily tracted down to a Table, in Table 5 there is a factor called "there is no immunization available" (5.7%), but this about a training message recalled or not, not in fact real immunization. Furthermore, the information on immunization of 34.2% in 2006 comes from heaven, can not be found in the Tables.

My judgement is that there are compulsory items to be revised, and therefore the manuscript can not be published yet.

I do want to state firmly that the data are very interesting and worth to be published, but the authors have to do a little better on the analysis and make a conversion of their data to a readable paper for the audience.