Reviewer's report

Title: Changing Risk Awareness and Personal Protection Measures for Lowly to Highly Pathogenic Avian Influenza in Live-Poultry Markets in Taiwan, 2007 to 2012

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Reviewer: Qiuyan Liao

Reviewer's report:

Major compulsory revision:

Comments:

The paper is generally poorly written containing various grammar errors and defects.

The following major drawbacks make me think that it is not acceptable for publication at present.

1. Introduction: study objectives though mentioned in the first paragraph of Page 7 were not clear. Based on the information provided in the introduction, there is no sufficient justification for why it is important to explore these study objectives. Besides, the authors also need to be careful and clear when mentioned each concept. For example, there is no explanation for what "risk awareness" means, what kinds of attitudes are referred, and protection measures against which diseases.

2. Methods: a lot of information is missing in the methods. For example, how to decide the sample size? Is the sample size sufficient to detect differences to achieve the study objectives, particularly those for study conducted in stage II? What are the response scales of the questions used in the questionnaire? How do you dichotomize them for data analysis? What are the reasons to dichotomize these variables in such ways? How to approach the respondents? How long is the questionnaire? What are the response rates? In the data analysis, the explanation for the multivariate analysis is very confused. It is not clear what are the outcome variables, what are the explanatory factors and what are the confounders to be controlled. Furthermore, since the authors combined subjects recruited at different periods and different sites into a sample in Stage I, there should be adjustment for the cluster and period effects.

3. Results: Most of the time, I feel confused about whether the results are for the LPMWs or the community residents and sometimes it is not clear about what the reference groups for the odds ratios. Sometimes, I don't understand why certain associations are explored in the study. For example, to explore the association between belief in that human cases of AI would not happen in Taiwan and knowledge of the new policy. Besides, there is no explanation for what the "Ten No's, Five Needs" is.
4. Discussion: for the comparisons of respondents' attitudes, risk perception and behaviors before and after the outbreak of HPAI H5N2, it is wrong the draw the conclusion about the changes in attitudes or risk perception merely based on the chi-square test. Since both samples are not representative to the LPMW population or community residents, sampling errors may be a bit issue for the difference in attitudes or risk perception between the two periods.

Language is a bit issue. The authors seem not to carefully prepare this manuscript. Due to the grammar problems, it makes the readers difficult to understand the manuscript in many points and sometimes lead to misunderstanding. For example, the sentence in Page 16, Line 4 "Moreover, the respondents who perceived that the outbreaks in China would affect Taiwanese will become infected with AIV..."

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

None.