Reviewer's report

Title: Alcohol, betel-nut and cigarette consumption are negatively associated with health promoting behaviors in Taiwan: A cross-sectional study

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Reviewer: Jie-Min Lee

Reviewer's report:

Dear Authors

This study describes the relationships between ABC consumers and health promoting behaviors among community adults living around an area with a high prevalence of oral cancer. This paper could potentially make a good contribution to conclude whether alcohol drinking, betel nut chewing and cigarette smoking are associated with poor health promoting behaviors and a high prevalence of oral cancer. However, what confused me is that authors didn't presentation the logistic regression estimation result of alcohol consumption associated with personal factors and health promoting behavior. And in sample characteristics for cross-sectional data. I really wonder why the sample of female is greater than male sample. This means that female account for the ABC consumption behavior has a higher proportion. There are few places where clarifications or more details are needed (see specific comments below)

Major Compulsory Revisions

1. On page3, the Introduction part, to help get a handle on this I would have been interested to see some basic review the existing evidence, even if it is only a few sentences. In particular, the authors should first refer to existing alcohol drinking, betel quid chewing and cigarette smoking prevalence and ABC consumption associated factor with health promoting behaviors in Taiwan.

2. On page7, More detailed description about the survey design is helpful. For example, What is the response rate? How do you know they are representative? Please give more details.

3. Page 12, there is some confusion with the paper that needs to be fixed. Table 2 shows that betel-nut and cigarette consumption was associated with middle school education, and not bad economic status. But then they state (on page 12, last line). Participants with high school education and poor/bad economic status
were 2.49 and 1.75 times more susceptible to betel quid chewing regularly than those with a college education and good economic status.

Discretionary Revisions

1. On page 9, “Alcohol drinking, betel-nut chewing and cigarette smoking (ABC) habits were measured using five questions....” I think author could related these descriptions with some references to provide more precise explanations about (ABC) habits and health promoting behavior measurement.

2. On page 8, the sampling procedure part, to reflect the proportions of population of ABC consumption the survey sample data need to weight by gender.

3. Page 12, The logistic regression model (Table 3) revealed correlation of betel nut and cigarette consumption. Why not use “Vegetable and fruit” in logistic regression model.

4. Page 13, line 1 and line 3, Replace ‘betel quid chewing regularly’ with ‘betel-nut and cigarette consumption regularly’.

5. In the last para of the Page 13 “ This study did not use random sampling but a significantly higher percentage of ABC consumption was identified. The prevalence of ABC consumption was identified in 35%, 17%, and 26% of participants, respectively. .... Furthermore, this study identified that 14% regularly consumed both betel quid and cigarettes, and 9% consumed A, B and C regularly.” could you please provide in the table to illustrate these figures.

6. In the last para of the Page 13, In the gender difference, males that regularly consumed ABC was 53.2%, 32.7% and 50.2%, respectively. These numbers were higher than the reported nation-wide percentages among both genders; in males aged over 18 years, the prevalence of current ABC behaviors were 18.8%, 13.0% and 35.0%, respectively. I think author could related these descriptions with some references to provide more precise explanations about these numbers were higher than the reported nation-wide percentages among both genders.

Level of interest: An article whose findings are important to those with closely related research interests

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

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests