Reviewer’s report

Title: Effect of health education on severe thalassemia prevention and control in communities in Cambodia

Version: 1 Date: 18 Aug 2017

Reviewer: M Hajipour

Reviewer's report:

Dear Author

This was a good article in the scope of thalassemia, however some questions remained unanswered for the reviewer:

How long after the educational intervention the case group filled the questionnaire? And what was the rationale behind selecting this time interval?

In knowledge and attitude studies, it is critically important to evaluate validity and reliability of questionnaire before conducting the main study. Why did you use Richardson test to evaluate the reliability? What was the sample size for the reliability study? Regarding the type of questionnaire it seems to be necessary to consult with professors in the field of health education. In the reliability study, what was the time interval between filling the primary questionnaire and the main one? Were participants of the reliability study included in to the main study?

Sample size need more consideration.

Regarding the little sample size and many job stratifications, the number of cases and controls in each job stratum tend to be low. It results in erroneous results of the study. It seems to be favorable to integrate some job strata.

Study participants were 18- 40 years of age. Since 18 year old people have at last high school degree and on the other side of spectrum people with 40 years of are more likely to have academic degrees, level of education is also an important variable in knowledge and attitude studies. May be low sample size of study resulted in insignificant result in this domain, however this was not discussed in the discussion.
In the "statistical analyses" it was mentioned that multivariate logistic regression model was used, however tables illustrated nothing related to this model. What were criteria for including variables in to multivariate logistic regression model, if this model was used?

Direct questions to evaluate the level of income may result in information bias. In order to evaluate socioeconomic status, it seems to be more appropriate to integrate several economic indexes and use concentration index.

Reporting only p- value for univariate analysis is inappropriate. It is necessary to report odds ratio (OR) and confidence interval (CI) in addition to the p- value for each variable.

Some variables in table 2 have low frequency. Including these variables in to analysis results in erroneous results.

In table 7, it is necessary to report OR and discuss the results according to that.

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