Author’s response to reviews

Title: Depression, anxiety, and suicidal ideation among Vietnamese secondary school students and proposed solutions: a cross-sectional study

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Author’s response to reviews: see over
Author's response to review

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Title: Depression, anxiety, and suicidal ideation among Vietnamese secondary school students and proposed solutions: a cross-sectional study

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Version: 2 Date: 9 Apr 2013

Author’s response to reviews: see below
Reviewer's report

Title: Depression, anxiety, and suicidal ideation among Vietnamese secondary school students and proposed solutions: a cross-sectional study

Version: 2 Date: 10 August 2013

Reviewer: Mary C Smith Fawzi

Reviewer's report:


We thank the reviewer for careful reading and many constructive questions and comments to help us improve the paper. We also thank her for informing us about the related manuscript conducted in rural Haiti submitted to the journal of BMC Public Health.

The manuscript reports on an urgent health need among Vietnamese youth. I have reviewed the manuscript, and there are some changes I think need to be made before the article can be accepted for publication.

I would consider these all major compulsory revisions. If the authors choose not to make the revision, then they should provide justification.

We thank the reviewer for taking time to consider our work and for your critical suggestions and comments, which indeed help us to improve our manuscript. We would like to explain how we have addressed the reviewers’ concerns as follows.

Abstract:

1) For the ‘methods’ section, typically you would not refer to a study as ‘It applied’… I think it might be better to say: ‘A semi-structured questionnaire was used to assess anxiety, depression, suicidality, and potential solutions based on feedback from youth.’ It is semi-structured since the potential solutions are obtained through open-ended questions. You can describe in more detail the CES-D in the manuscript (which you do provide).
Thanks for pointing out this and explanation.

**Original (abstract, methods section, line 25-27):**
It applied a structured questionnaire measuring anxiety, the Center for Epidemiology Studies Depression Scale, the Educational Stress Scale for Adolescents, and additional variables on demography, suicide, and possible solutions.

**We have re-written the methods section as follows:**

**Revised (abstract, methods section, line 26-28):**
A structured questionnaire was used to assess anxiety, depression, suicidal ideation, and proposed solutions based on feedback from youth. Depression was measured using the Center for Epidemiology Studies Depression Scale.

2) For the ‘results’ section, you might state: ‘The prevalence estimates of symptoms reaching a threshold comparable to a diagnosis of anxiety and depression were 22.8% and 41.1%, respectively.’

**Thanks for the comment and suggestion.**

**Original (abstract, results section, line 28-29):**
The prevalence of the state of being at risk of anxiety or depression, according to the Center for Epidemiology Studies Depression Scale, was 22.8% and 41.1%, respectively.

**We have changed this sentence as follows (line 29-30):**
The prevalence estimates of symptoms reaching a threshold comparable to a diagnosis of anxiety and depression were 22.8% and 41.1%, respectively.

3) For the ‘results’ section, you may want to state the following: ‘attitudes of parents and teachers needed to change, reflecting a more supportive rather than punitive approach.’ I’m not sure this is what you mean, but it would be good to mention briefly the changes the students were referring to.

**Thanks for pointing out this and helping us to state more clearly. Your version expresses what we would like to explain. Therefore, we revised the sentence from line 40 to 42:**
Academic curricula and attitude of parents and teachers need to change, from a punitive to a
more supportive approach to reduce the risk of poor mental health.

4) For the ‘conclusions’ I would replace ‘suicide ideation’ with ‘suicidal ideation.’

We have replaced “suicide ideation” with “suicidal ideation” (line 38)

Background:

1) The second sentence in the first paragraph is not clear; it should be restated/clarified.

Thanks for pointing this out.

Original (line 49-51):
The mental health of adolescents and young people is a crucial issue because it has a long-term impact, affecting the health of the current generation and their future adult years, and may even perpetuate disadvantages into the next generation

We have reformulated and separated into sentences to be clearer. (line 50-53)
The mental health of adolescents and young people is a crucial issue because of the general burden of mental illness and because mental illness has the potential to affect the rest of their adult lives and the future lives of the next generation

2) For page 4, specify the location of where study [10] was carried out.

We have added (2006) in Hanoi City (line 69) to be more specific.

3) For page 4, 1st paragraph, I would replace ‘attempt to suicide’ with ‘attempt to commit suicide.’

We have replaced “attempt to suicide” with “actually attempted suicide” (line 73).

Methods:

1) For the first sub-heading I would rephrase as ‘Study design and population’ to avoid redundancy.

We have left out the second “study”.

2) For the second paragraph in the methods, I’m not sure what you mean by ‘purposive cluster sampling’. It appears that you randomly selected youth from each school. In this regard, I would remove this design term and just state that you selected 3 secondary schools to reflect
Thank you very much for pointing this out. We have revised the statement.

**Original (methods, study design and population, second paragraph, line 95-97):**
The population consisted of a purposive cluster sample of students from three secondary schools in urban and suburban areas, stratified according to locality and to being a specialized or general secondary school.

**Revised (methods, study design and population, second paragraph, line 90-92):**
The population was purposively selected from the three secondary schools in urban and suburban areas, comprising specialized and general secondary schools.

3) It is unclear what is meant by: ‘Next, three among all grade 10-12 classes.’ Are you referring to 3 students or 3 classes?

**It means that each grade from 10 to 12 was chosen randomly from each school.**

**Original (methods, study design and population, second paragraph, line 97-98):**
Next, three among all grade 10-12 classes were chosen randomly from each school.

**Revised (methods, study design and population, second paragraph, line 92-93):**
In each school, three classes, one from each grade from 10 to 12, were chosen randomly.

4) Under ‘data collection,’ it’s not clear what is meant by ‘student’s upbringing.’ Please clarify this.

**Our apologies. It should be “parent’s upbringing. Therefore student’s upbringing replaced by parental upbringing.** (line 103)

5) Under ‘data collection,’ please correct the title for the CES-D to ‘Center for Epidemiologic Studies Depression Scale.’

**We have replaced the CES-D by the Center for Epidemiologic Studies Depression Scale.**

6) In this same paragraph, I would replace ‘with a range of 0-60’ to ‘with a range of total scores from 0-60’ to make it clear to the reader.

**It was replaced with a range of total scores from 0-60 (line 109-110)**
7) For the 3rd paragraph under ‘data collection’ spell out what K-10 is.

**It was replaced with “Kessler 10 – Psychological Distress Scale” (line 123).**

8) In the same paragraph, replace ‘receiver-operation characteristic’ with ‘receiver operating characteristic.’

**It was revised, in line 122: “receiver operating characteristic”**

9) In the same paragraph, 31.3% is reported as the sensitivity, but for an AUC of 0.72 I’m wondering if this is accurate. The authors may wish to check this.

Thank you for this question. I have checked the information from several papers about Kessler 10, and found that the information is correct as stated in the Thai study [12]. Besides that, I also checked the sensitivity and specificity from other resources and found the sensitivity and specificity for the K10 at various scoring levels. A cut-off score of 19 results in a sensitivity of 71% and a specificity of 90%. A cut-off score of 20 results in a sensitivity of 66% and slightly higher specificity. A cut-off score of 26 results in lower sensitivity, only 36%, and higher specificity, 98%.


10) In the 4th paragraph under ‘data collection’ instead of stating ‘Likert-type scale’ I would say ‘Likert scale.’

**This has been revised in line 128: Likert scale**

11) In the same paragraph, I would replace ‘worry about grade’ with ‘worry about grades.’

**Thanks for helping to correct the phrase.**

12) In the same paragraph, I would indicate what the sensitivity and specificity estimates of the ESSA are.

**Thanks you very much for pointing this out. We agree with reviewer that the sensitivity and specificity estimates of the ESSA need to be indicated. However, I have not found any paper pointing out the estimates of sensitivity and specificity. If the reviewer can**
advise on this we will be pleased to include them.

13) In the statistical analysis section, in the first sentence, I would replace ‘sample population’ with ‘study population.’ Typically you would refer to either ‘sample’ or ‘study population.’

Yes, thanks for pointing out the distinction. We have replaced “sample population” with “study population”. (Line 143)

14) In the same paragraph, you refer to ‘physically and emotionally abused.’ But in other sections of the manuscript you refer to ‘physically or emotionally abused.’ Please be clear which one it is (either ‘and’ or ‘or’) and be consistent throughout the manuscript.

Yes, physically or emotionally abused is correct. We have replaced “and” with “or”.

15) In the same paragraph, I would replace ‘often being physically and emotionally abused’ with just ‘being physically and emotionally abused.’

Thank you for this suggestion. We use the word “often” in this phrase to contrast with other students who were “less” physically or emotionally abused.

16) In the same paragraph, I would replace ‘and among others’ with just ‘among others.’

Thanks for your correction this point. We have removed the word “and” (Line 151).

17) In the same paragraph, I would replace ‘staffs’ with ‘staff members.’

We have replaced “staffs” with “staff members”. (Line 151)

18) In the same paragraph, I would replace ‘study results’ with ‘academic performance.’ I would make this global change throughout the text.

We have replaced “study results” with “academic performance”. (Line 151)

19) In the same paragraph, the p-value should be less than 0.05 and not less than or equal to 0.05.

Thank you for the keen observation. We have replaced “≤” with < 0.05. (Line 158)

Results:

1) It’s unclear what the difference is between participation rates (36.4% and 63.6%) and the
response rate (33%)? You should have one overall participation rate, i.e. among those whom you invited to participate, what percent agreed to participate. Then break that down by girls/boys as well.

Thank you very much for pointing this out. We agree that the sentence was not clear and have clarified it. The number of students for each grade from 10 to 12 was equal among the three groups.

Original (results section, first paragraph, line 174):
Response rates were around 33% and did not differ significantly by study grade.

Revised (results section, first paragraph, line 174-176):
The number of students for each grade from 10 to 12 was equal among the three grades, with a response rate of about 33% (grade 10: 33.5%, grade 11: 33.9%, and grade 12: 32.6%).

2) Also, you would mention that response rates were around 33%; this needs to be an exact percent.

Please see above.

3) In the ‘Mental Health’ section, for anxiety and depression, it should be clear if these are point prevalence, 2-week prevalence, or lifetime prevalence estimates.

Thank you very much for this question. For time estimate, anxiety is point prevalence and depression is for the past week. Therefore we have added “based on current feeling” after anxiety in line 180 and “during the past week” in line 185 for more explanation

4) In the ‘Anxiety’ section it is unclear what it means by stating 23% of students were ‘anxious.’ You may consider stating: ‘23% of students demonstrated anxiety symptoms as a clinically significant level.’ I would state this only if this is how the cut-off can be interpreted.

Thank you very much for this advice.

Original (results section, mental health, line 180):
Nearly one fourth (23%) of students were anxious.
Revised (results section, mental health, line 181-183):

23% of students demonstrated anxiety symptoms at a clinically significant level. Female students were three times more likely to have anxiety symptoms than their male counterparts.

5) In the ‘Depression’ section rather than stating ‘classified as having depressive symptoms’ you could say ‘classified as having an elevated level of depressive symptoms.’

We have replaced ‘classified as having depressive symptoms’ with ‘classified as having an elevated level of depressive symptoms.’ Line 191-192.

6) In the ‘Depression section’ rather than stating ’18.7% of the students were categorized as having depression’ it should state: ’18.7% of the students demonstrated a level of depressive symptoms comparable with major depressive disorder.’

We have reformulated as you suggested. (line 191-192)

7) In the second paragraph of page 9, instead of saying ‘natural parents’ it should say ‘biological parents.’

We have replaced “natural parents” with “biological parents”. Line 208.

8) In the same paragraph, instead of saying ‘poor study results’ it would be better to state ‘poor academic performance.’

We have replaced “poor study results” with “poor academic performance” in line 211-212.

9) In the last paragraph on p.9, it’s unclear what is meant by ‘possible depression.’ Be consistent with wording and indicate the cut-off score here.

Thank you. We should be consistent with the cut-off point 16 (possible case of depression line 114). Therefore we have replaced “possible depression” with “possible cases of depression” (line 204)

10) In the same paragraph, if the OR= 1.34, then instead of stating ‘reduced the odds ratios 34%’ it should state ‘reduced the odds by 34%.’
Thanks, we address this in line 219.

11) For the section on suicide, are there prevalence estimates lifetime or one-year prevalence? Please specify the time frame.

We have added “in their lifetime” in the end of the sentence to specify prevalence estimates lifetime. (Line 226)

12) For the section on improving mental health of students. It’s unclear what attitudes and behaviors of the teachers and parents are that should be changed. If it is a more supportive approach, etc., this should be specified.

Thank you. We agree that it should be more specific and we have rewritten this sentence as follows, line 237-239.

“About half of the students thought their parents’ (47.6%) and teachers’ (43.9%) attitudes and behaviors toward them needed to change and that teaching should take a supportive rather than punitive approach.”

13) In the same paragraph, I would suggest not putting parentheses around the word ‘strongly.’

We have left out the parentheses. (See line 240)

Discussion:

1) The first sentence states ‘This study established…’ Typically you wouldn’t say ‘established’ but ‘demonstrated’ may be more appropriate here.

We have replaced “established” with “demonstrated”. (Line 247)

2) On page 12, note that there is a statement that says ‘adolescents and adolescents.’ This should be rephrased to avoid redundancy.

Thank you. Revised as follows.

Original (Discussion, third paragraph, line 279-281):

The present study showed a trend consistent with prevalence estimates of mental health
problems among Vietnamese adolescents and adolescents in Western countries.

Revised (Discussion, third paragraph, line 280-282):  
The present study showed a trend consistent with prevalence estimates of mental health problems among adolescents in Vietnam and in Western countries.

3) On page 12, second paragraph, it’s not clear what ‘higher average family background level’ is. If this is socioeconomic status, then it should be specified. Another interpretation here could be that the medical students are farther along in their studies, whereas, the secondary school students may still be unclear what may happen, causing potentially greater education-related anxiety.

Thank you. Our explanation was not clear enough and was revised as follows.

Original (Discussion, fourth paragraph, line 287-289):  
The higher rate of suicide among secondary students in this study compared to medical university students may reflect the higher average family background level as well as the additional maturity of the medical students.

Revised (Discussion, fourth paragraph, line 293-298):  
The higher rate of suicide ideation among secondary school students in this study compared to medical university students may reflect the higher education and income of university students’ parents. Another interpretation could be that the medical students are farther along in their studies and may be more confident of the outcomes, whereas the secondary school students may still be uncertain what may happen in their studies, potentially causing greater education-related anxiety.

4) Under the limitations section, instead of stating ‘screening test’ it is better to state ‘screening instrument.’

Thanks for this suggestion. We have replaced “screening test” with “screening instrument”. (Line 322-323)
5) For the CES-D if there is a low specificity, it should be stated in this sentence.

*We have added specificity information to explain clearly.* (Line 324)

77% in primary care patients using the cut-off point of 16

6) It’s unclear what is meant by ‘cross-contamination’ here; I don’t think that this is a significant limitation in the study (since this would relate to all studies on depression), so I think you can take this out.

*Thanks for suggestion. We have taken this out.*

7) When discussing ‘linkages’ between covariates, it may be more appropriate to state that the temporal sequence of covariates and depression, for example, cannot be ascertained since it is a cross-sectional study.

*Yes, we have replaced* “it is not possible to ascertain the linkages between covariates in a cross-sectional study. For example, depression can lead to poor study results, but poor study results can also lead to high educational stress and depression. However, our study required students to report on the last semester while the CES-D scale measured the students’ state of mind during the previous week. In this way, the direct effect of study results and educational stress or other covariates on depression was probably limited” *with a shorter sentence as you suggested to be clearer.*

Second, the temporal sequence of covariates and depression, for example, cannot be ascertained because it was a cross-sectional study. *(Line 324-326).*

8) In the last paragraph of the limitations section, it is not clear what is meant by low non-respondent bias. If you have people who have a higher level of depression and a higher level of abuse at home also not participating, then you may have a selection bias towards the null, potentially underestimating the associations that were observed.

*Yes, thank you very much for your explanation.*

*Original (Discussion, Limitation, final limitation), line 333-336:*
“Finally, it is possible the selected population was not entirely representative of the whole country. However, compared with the national average, rates of depression and anxiety were quite similar to national studies. It is therefore likely that the rates in this sample reflect the secondary school students among the Vietnamese population as a whole.”

Revised (line 335-336):

“Four, the study population may not be representative of all youth of secondary school age throughout the country, given that some youth do not attend secondary school. However, compared with the national average, rates of depression and anxiety were quite similar to national studies”

9) Also, it states that ‘it is possible the selected populations are not entirely representative of the whole country.’ It may be better to state that ‘the study population was not representative of secondary school-aged youth throughout the study, given that some youth do not attend secondary school.’

Thank you very much for suggestion to clarify. We have revised: “the study population may not be representative of all youth of secondary school age throughout the country, given that some youth do not attend secondary school”. Line 335-336

10) Also, it is stated that the rates were similar to the national averages, but in the manuscript, the differences between this study and other studies among youth are highlighted; regional differences were part of this explanation. Therefore, I would take out that this is representative of secondary school students in Vietnam as a whole.

We totally agree with the reviewer and decide to take this out.

11) One point that should be added in the limitations is that the cut-off scores were not validated among youth in Vietnam.

Yes, it’s right. We have added this point, line 338-339:

Another limitation is that the cut-off scores were not validated among youth in Vietnam which
means they should be used with caution.

12) Another limitation is the low sensitivity of the anxiety measure (31%); this may result in an underestimate in the burden of anxiety.

**We have added this into the study limitations, line 339-340S:**

Finally, the low sensitivity of the anxiety measure (31%) may have resulted in an underestimate of the burden of anxiety.

**Conclusion:**

1) I think that the conclusion can be strengthened. It is an opportunity to advocate for increased access to mental health services for youth in Vietnam. I think that the point about feasibility of a web-based program sounds good and supported by the students’ points, but you also may want to point out that there may be a need for school-based counseling services, and that students mentioned they would access these services. Although this may not be immediately feasible, it could be considered a longer-term goal. Also, one possibility is training primary care physicians in mental health care so that it is feasible to increase access to these services without necessarily relying on the availability of psychiatrists or social workers. A protective factor in your analysis relates to the availability of a tutor. This can even be a volunteer arrangement with local university students, and wouldn’t necessarily cost extra money.

Teachers and parents can also participate in psychoeducation programs; if they are more aware of their approach to the students and how it may be counterproductive, this may help to address some of the issues related to attitudes that the students raised and may allow for discussion of physical/emotional abuse, which in their perspective may be appropriate punishment for bad behavior or poor academic performance. In a final note, the manuscript should be carefully edited; in particular there were a number of redundancies.

**Thank you very much for pointing out and guiding for a stronger conclusion. We have**
added some important points as your advice. (Line 351-358).

“In addition, schools should establish school-based counseling services for students, possibly by collaborating with volunteers from the Youth Union, the largest social-political organization of Vietnamese youth, at local universities. Teachers and parents should also participate in psychological education programs to raise awareness of the effect of their approach to the students and how it may be counterproductive. This may help to address some of the issues related to teacher and parent attitudes raised by the students and may allow for discussion of physical or emotional abuse which parents and teachers may consider to be appropriate punishment for bad behavior or poor academic performance.”

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Thanks for pointing out this.
The manuscript has been reviewed by a native English speaker with extensive experience in writing scientific papers. We have revised the text and hope all the English errors were fixed.

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

Declaration of competing interests:

I declare that I have no competing interests.
Reviewer's report

Title: Depression, anxiety, and suicidal ideation among Vietnamese secondary school students and proposed solutions: a cross-sectional study

Version: 2 Date: 20 August 2013

Reviewer: Augustine J Kposowa

We are grateful to the reviewer for careful reading of the manuscript and for providing many helpful constructive comments and suggestions.

Reviewer's report:

1. In Table 4, authors have a heading in the last two columns: Multivariate Regression. It is unclear from the table what the outcome variable is. The general heading is Association between suicide and poor mental health. I would like authors to modify that heading from suicide to suicide ideation or suicidal behavior. This is because what is being discussed in the paper is NOT completed suicide but types of suicidal behavior (ideation, attempts, planning). Authors also need to change the main title of the paper (page 1) to reflect the fact that they do not have data on completed suicides.

Thank you very much for pointing this out. In Table 4, the heading in the last two columns “Multivariate Regression” has been replaced with “Multivariate logistic regression”. We agree with the reviewer’s comment that this is not completed suicide, and we decided to replace “suicide” with “suicidal behaviors” in the title (page 1) and in the title of Table 4: Association between suicidal ideation and poor mental health (line 494)

2. The last two tables are very difficult to follow. This has to do largely with the way authors decided to format the tables. In Table 3, for instance, authors have variable names going into the next two columns. I advise that they prevent variable names or descriptions from extending beyond column 1 titled "Factors." I also wonder why that column is titled Factors.
If confirmatory factor analysis were used, is it appropriate to call these factors?

**Thanks for pointing this comment and suggestion.**

We have reformatted the tables to prevent variable names or descriptions from extending beyond their column.

We have also replaced “Factors” in the column 1 title “Factor” in Table 3 with “characteristics”.

3. In Table 3, (under Depression), the number of cases in the cell called YES is just 32, compared to the NO cell with 442 persons. The next column has even fewer persons (23). Would authors address the issue of the validity of chi-squared results based on so few cases? Should the reader be concerned? The issue basically is this: if one were to distribute these 23 people across covariate categories in the logistic regression equation (last two columns), might there be expected cell frequencies less than 10. If the answer is YES, then some correction has to be done as the validity of the estimate (in this case Odds Ratio) is questionable. Typically, a cell with fewer than expected cases could lead to the inflation of an estimate (OR). Please check and also consult a couple of texts, e.g. Applied Logistic Regression (Hosmer and Lemeshow, latest edition), Logistic Regression (Kleinbaum and Klein, second edition or later). If there is nothing that you can do, then in the Discussion tell the reader to interpret the results with caution, and this would be enough (since you cannot create data that do not exist). You at the very least need to show understanding of the issues and be sensitive.

**Thank you very much for your comment and guidance. We have rechecked all the cells with fewer persons. All the expected cell frequencies were above 10, and the smallest was 22.26. The expected cell frequency of the column of 32 was 22.6 and of the column of 23 was 32.4 (please see the table below).**

<table>
<thead>
<tr>
<th>live with mentally ill person * CES_cate Crosstabulation</th>
<th>CES_cate</th>
<th>Total</th>
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The Hosmer-Lemeshow Goodness of Fit Test: all the models in the Hosmer-Lemeshow Test had a significant value of 0.921 (>0.05).

Besides that, we have added sentences in the statistical analysis to explain how we addressed the issue of the validity of Chi-square results and to check for the Goodness of Fit. (line 160-163)

“To address the issue of validity of Chi-square results, all the variables in all models must also have an expected cell frequency above 10 before entering them into the logistic regression model. Each model was also checked for Goodness of Fit by checking the significant value of the Hosmer-Lemeshow which must be higher than 0.05.”

Minor Essential Revisions

1. The participants in the study are secondary school students that for the most part are likely below 18 years of age. On page 3, authors move from describing poor mental health among secondary school students to university students. See this sentence: "This percentage was found to be even higher among first year students at Cantho University School of Medicine and Pharmacy." I suggest that the reference to university students be eliminated, and that authors stick to secondary school students.
We have taken out “This percentage was found to be even higher among first year students at Cantho University of Medicine and Pharmacy (south of Vietnam), with 34% of students having felt sad and hopeless every day for two weeks during the past 12 months.”

2. Is it possible to add a few more control variables to Table 4? For instance, do authors have measures of SES of parents/guardians? They provide educational stress, which I assume is being measured by information furnished by participants. What about marital status of parents, number of siblings, household size, income or some indicator, educational attainment of one of the parents? These variables have been shown in the suicide literature to influence suicidal behavior, and a couple (like marital status and household size) tap into social integration (as suggested by Durkheim and other sociologists). Readers will have more confidence in the results if a couple of these are included in the multivariate results. If you do not have them, say so.

Thank you for the comment and suggestion. We have added a few more control variables to the model to predict suicidal behaviors by Univariate and Multivariate Logistic Regression, applying the Backward Wald method. Before running Multivariate logistic regression, the issue of the validity of Chi-square test was checked and only all the expected cell frequencies higher than 10 were put into the Multivariate logistic Regression. We also checked the Hosmer-Lemeshow Goodness of Fit Test and all the models in the paper had the Hosmer-Lemeshow Test with significant values higher than 0.05.

Please see results of model predicting suicidal behaviors in Table 4.

Discretionary Revisions

1. On page 4, authors waste valuable space by informing readers of the location of Hanoi and Ho Chi Minh City. I think the readers of this journal know the relative location of those cities in Vietnam. You need not mention that Hanoi is in the North each time that Hanoi is
mentioned.

**We have take out mention about location of Hanoi, and Ho Chi Minh City.**

2. There is a sub-heading entitled Ethics (page 7). The information provided there is identical to what appears on page 4 under Study Design and Study Population. To eliminate redundancy, I suggest that authors delete either what appears on page 4 "The study was approved by the Scientific and Training Committees of Cantho University of Medicine..." or the Ethics subheading at the bottom of page 7. There is no need to have redundant information in the document.

**We have deleted redundant information about ethics on page 4.**

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests.