Reviewer's report

Title: Factors associated with mental health consultation in South Korea

Version: 0 Date: 02 May 2017

Reviewer: Harald Gündel

Reviewer's report:

The authors present results from a nationwide community health survey in Korea on multiple factors associated to mental health consultation. This appears to be an important topic. The chosen statistical model is appropriate and results are presented in three tables. Language and grammar are correct (as far as I can judge this as nonnative speaker). There are two major shortcomings: A) Right now results seem country specific and are not discussed enough / embedded in an international context. B) Author promise the reader specific strategies based on their results, but yet these are fairly descriptive and generic. Both issues can be fixed.

Page 1

Line 6 (Title): The title should capitalize on the fact of the multiple factor regression model associated with seeking mental health consultation, instead of highlighting education only.

Page 2 (Abstract)

Line 8 (Objective): Please change your objective accordingly

Line 13 (Methods): Please indicate that the data are from Korea.

Page 3 (Background)

Line 25: What is the potential reason that Korea is so worse of regarding suicide? What does this implicate for the generalizability of the findings (Add this to the discussion section)

Line 32: Obviously, authors refer to the same dataset/population. According to the descriptives N=228,781 were assessed with 12,743 reporting depressive symptoms. This is a proportion of 5.57%, not of 55.7% (12,743/2,287.81 instead of 12,743/228.781)
Line 36: Is this backed up by national treatment guidelines in Korea? If so, please state, this strengthens your argument.

Line 40: Please give some examples for the mentioned "several factors". This would make a nice transition for the next paragraph that you can pick up.

Line 54: Authors may want to extend this argument, since you find no evidence that income positive effects on self-reported counseling seeking behavior.

Page 4

Line 6: Please list one or two examples in brackets for direct and indirect means effects.

Page 5 (Material and Methods)

Line 17: Authors should write: "the sample consist only of those who report to have depressive symptoms" - not "who had DS" as there is no diagnose of this. Please correct throughout the manuscript (e.g. also line 38 same page):

Line 47: Authors should use the International Standard Education Classification (ISCED) to bring their results to a higher international comparability. Please underline the reference group, also in the description of the following categorical variables.

Page 6

Line 11: what is the reason for classifying age into such broad categories and not using smaller ones or a continuous variable?

Line 13: Marital status reads like five categories here. In the tables of the results however, marital status has only 3 categories. Please educate the reader why married and non-cohabit, bereaved and divorced are presented as a single category. E.g. Is there a specific cultural reason that married but not cohabit and divorced participants are in one category? From a gut feeling I would expect them to be different regarding consultation seeking behavior.
Line 15: Please give the definitions of regions (urban vs. rural) e.g. by the number of inhabitants in a certain area. Similar, please give the definition/numbers behind the income categories in your local currency and in an international one such as € euro to help the international readership to better understanding the values.

Line 17: Although i´m familiar with the collar description to categorize jobs within the labor force market, most readers of this journal won´t be. Please define briefly what type of jobs are included in these categories. Authors preferable include for example the International Classification of Occupation (ISCO) if available or the Erikson Goldthorpe Class Scheme alternatively.

Line 25: Although I understand the inclusion of the control variables from a technical point of view, authors have not given a reason yet why a) these variables should be associated with the outcome of interest and b) how these variables will help to develop more powerful strategies enhancing mental health consultation rates. Given the behavioral change associated with depression / depressive symptoms, these health behavior or self-care variables may serve more as proximate measure of symptom severity and therefore might take away "effects" from the variables that are useful and of interest when tailoring specific strategies to delivery healthcare (MH consultation) to certain subpopulations. Of course there will be arguments for both (including and excluding some of the variables), but authors should make their arguments for either way explicit.

Line 49: Given the quite large sample, significance levels are reached easily. The other question is what would be a policy relevant difference in consultations rates that justifies to allocate more resources to a certain subpopulation?

In addition, authors consider p-values here, but there is no single p-value presented in the text or tables. Please provide them.

Page 7

Line 8: Table 1 is not sufficiently reflected in the text. Authors calculated many comparisons between the consulted vs. non-consulted subjects, so please give the reader a quintessence of your findings of table 1.

Line 17: Authors may want to indicate that education results looks like a linear trend over the categories. Also make clear that this is one big model assessing the associations / OR simultaneously.
Line 36: Please indicate the reference group of regions here.

Line 40: Suicidal intentions appear here out of nowhere for the reader. Please add the description of the measure to the method section and provide a reasonable introduction in the background section.

Line 44: "Effect" is causal language, please use "association" throughout.

Line 45: Authors may consider to summarize the results of table three into a graph, e.g. a BarChart with odds on the y-axis and the groups like income and education on the x-axis.

Please indicate if these stratified models contain control variables.

Line 47: Stratification here is useful to investigate the associations. However, you may improve the information's you gain from the model by the introduction of interaction variables. This would give you certain subpopulations that you may infer from your previous analysis to be specifically at risk like low educated males from rural areas aged 65+. In addition, you can test directly coefficients against each to assess statistically significant differences between certain subgroups.

Page 9

Line 17: please also indicate the direction of association.

Page 10

Line 15: What about the urban regions? Or is this meant with "other regions". You may want to stick to the same wording to avoid confusing readers.

Line 41: please add to the limitation section that people with severe mental illnesses are less likely to respond to a survey (potential selection bias).

General comment. At the end of the Intro you promised the reader to present / suggest strategies for development of depression education programs. Yet, I have not read any elaborated strategy in the discussion.
Also, I am missing a discussion of the present results in the context of similar research in Korea and/or in other countries. Are your findings consistent with previous research in your and in other countries?

Authors fail to discuss anything on the suicidal group and their "higher" delivered care / mental consultation. If the suicidal intention group instead of the depressive symptom group is the analyzed population, do you gain similar / comparable results (supplementary analysis).

Page 12:

Line 34: Authors point out stigmatization as a problem, yet it is not introduced in the background section.

Page 16 & 17 (Table 1 & 2)

The order of variables should remain stable throughout the tables.

The reference category should be the first category (Household income Tab2)

Sex is an indicator of the biological assessment. I guess you had also self-reports, so gender would be the correct term.

Table 1: Please provide under the table the applied test (CHI2)

Table 2: Please provide under the table the statistical applied (Logistic regression) and the included N

Table 2 and 3 would benefit from a reading example under the table.

Page 19 Literature:

Literature heading is missing
Line 15 (Source 3): This is a webpage. Please add date of retrieval. I tried to follow the weblink but could not find the described contend there. You may consider to link to a permanent document or remove the unspecific link (it points to a homepage)

Line 57: Reference 10 seems to be incomplete.

Page 20 line 14: is there a newer reference available?

Page 21

Line 9: ref. 23 add date of access

Line 56 Ref. 32: Cite this more specific, e.g. chapter, pages etc. A handbook is pretty broad.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable
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Please complete a declaration of competing interests, considering the following questions:

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2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

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If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

None

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