Reviewer’s report

Title: COPING BETTER WITH HEALTH PROBLEMS AFTER A VISIT TO THE FAMILY PHYSICIAN: ASSOCIATIONS WITH PATIENTS AND PHYSICIANS CHARACTERISTICS

Version: 0 Date: 04 May 2017

Reviewer: Sven Streit

Reviewer’s report:

Reviewer report of the submission FAMP-D-17-00117

COPING BETTER WITH HEALTH PROBLEMS AFTER A VISIT IN FAMILY MEDICINE: ASSOCIATIONS WITH PATIENTS AND PHYSICIANS' CHARACTERISTICS

Thank you for the opportunity this interesting paper. Cohidon et al. aimed to assess which patient and physician (and practice) characteristics are associated with patients reporting to be better able to cope with health problems after visiting their family physician (FP) in a representative sample of FPs in Switzerland. This study analyses the Swiss part of data from an international study.

It is my belief that as researchers and clinicians we have to strengthen our efforts to report patient relevant outcomes such as coping with health problems as Cohidon et al. did. This paper has an interestingly written introduction and a promising dataset that can be used to accomplish the specified aim. Although this is a cross-sectional study only reporting associations, it merits a consideration for publication in BMC family practice.

However, in my opinion, the work would profit from a major revision as outlined below in detail.

Major points

1. Selection bias

While it was the intent to draw a representative sample of Swiss FPs, the low response rate of 10% among FPs might introduce selection bias as the authors acknowledge for in their limitation section. However, the exclusion of patients answering 'I don't know' in the outcome measure (about 230 of about 1800 patients) is an additional risk to introduce bias. The authors state here in their discussion section 'we also performed the statistical analysis including the 'don't know' answers and the results were very close'. In summary, I recommend two things here: better description of the sensitivity analysis (how were the 'don't know answer' included) and better organization of the manuscript (sensitivity analysis has to be noted in the methods section and the results in the results section (see also my point 7).
2. Appropriateness of the statistical analysis

   a. Each FP randomly selected about 9 patients. The authors account for the 'nested nature of the observations' in the methods section. I would expect the use of a mixed logistic regression analysis accounting for the clustering effect within each FP but I don't see how the authors did this.

   b. Only about 120 patients reported no better coping after consultation which would allow to adjust for about 12 covariates to be included into the multivariate model to prevent data sparsity. The final model (Table 3) includes 13 covariates. I don't believe this will already result in sparse data but since this analysis was based on a backwards elimination, I would suggest to adjust for 12 covariates and/or better justify the 13 covariates. Also, I lack a clear description, how the backwards elimination was done. How were the models compared when removing covariates.

   c. Did you test for collinearity and/or interaction in the final model? I read 'we also tested a potential interaction between the number of visits and an existing chronic disease but it was not the case' (discussion section). I recommend a clear description why you tested for interaction (a priori chosen or along the analysis and for which other covariates you tested for interaction). I would be interested to know if the main reason for the visit (ill or didn't feel well vs. other reasons) modified the effect.

3. Outcome

I cannot follow the choices around the outcome. While most of the manuscript is around better coping, the outcome for the analysis is reported as 'no enablement' = not coping well with health problems. This switch from positive to negative also happens in covariates (e.g. 'would you recommend this doctor' are reported as 'no') but in the discussion the negative covariates and the negative outcome are then reported as 'enablement was higher when the patients recommend their doctor (OR=4.76 [1.98-11.43])'. The numbers are still right but for the reader it is difficult to switch perspectives along the sections of the manuscript. My suggestion is to stick to one outcome (enablement yes vs. no) and report covariates (e.g. recommend this doctors) as yes vs. no, too.

4. Effort reward imbalance exposure

The authors conclude that 'only exposure to job stress, through effort-reward imbalance, among physicians is associated with a better enablement among patients'. However, the results in table 3 show a non-significant association (adjusted OR 0.66, 95%CI 0.42, 1.03). Thanks to clarify if there is an error in the table or the association is not significant and the results/discussion needs rephrasing.

5. Measurements
Many covariates have been grouped e.g. in two quantiles according to their median. This only comes clear in the discussion section for e.g. age or in the tables. I suggest you clearly describe in the methods section the grouping and justification of grouping the covariates to help the reader to understand. Also, the measurement of Effort reward imbalance could be better explained in the methods section (Yes vs. no or Likert-scale?).

6. Residual confounding

In such studies, there could always be residual confounding but when looking for predictors of patient factors to coping with health problems I would be interested to know, what has just happened in the consultation after which the questionnaire was distributed. You have a variable there but maybe stratify according to the reasons for encounter? Another interesting covariate would be for how long the patient is seeing this physician. Is there a proxy you could adjust for in the QUALICOPC dataset? This would also help you to better argue your claim in the discussion section that 'there might be an ideal number of visits for a better enablement' (line 169-170) because another explanation could be that those not satisfied did not re-consult with the same FP.

7. Organisation of the manuscript

I acknowledge there are different approaches to organize a manuscript but in this case, the paper is well written and clear until about the middle of the methods section and then the information are a bit misplaced. I suggest to move around the following parts and bits of information to the respective sections:

Introduction: Information about QUALICOPC move to the methods section. Results: 'we excluded those who answered 'I don't know' (…)move to the methods section.

Discussion: 'Lastly, including or not this variable did not change the results about the other variables in the final model' move to the results section.

Discussion: '(…) the consultation's length was a physician's variable (…)' move to the methods section.
Discussion: '(…) the low participation rate (about 10%)' move to the methods section.

Minor points

1. Abstract: Background: period missing after (FP)

2. Abstract: Background: would remove 'both' in line 3 since you refer to three items.

3. Abstract: Results: Would report OR and 95%CI and not only e.g. '(1.55 [1.01-2.3])'

4. Introduction: first line: Would remove 'satisfaction through' and focus on experience that as you know is different to satisfaction.
5. Introduction: line 44 1st page (by the way: it would be helpful to have the pages numbered): the references 12, 13 are separated from 7,11,13,14 change to '[7,11-14]'

6. Methods: line 63: would change 'GP' to 'FP' to be consistent.

7. Discussion: line 231: explain 'PEI'

8. Table 1: remove square-brackets around '45-60' and '60-70'. Also change '45-60' to '45-59' if appropriate.

9. Table 1 misses some patient characteristics that are shown in table 2 (e.g. 'recommend this doctor?'). I suggest to justify or present all patient characteristics.

10. Table 2: define what means 'own doctor' also in the methods section.

11. Table 3: remove or explain 'practice variance 10^31'

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

No

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

Yes

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

No

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:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:
1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

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?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

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.

I declare I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal