Reviewer’s report

Title: Cross-sectional study of prevalence of dementia, behavioural symptoms, mobility, pain and other health parameters in nursing homes in Austria and the Czech Republic: Results from the DEMDATA project

Version: 0 Date: 09 Mar 2018

Reviewer: Margareta Halek

Reviewer's report:

ABSTRACT

1. Please state clearly the design of the study in the title and in the abstract

Introduction:

2. I am not convinced by the information provided in the background section that there are only few epidemiological studies carried out in nursing homes. The nursing home sector is in generally the most examined. Is there no reviews about this topic that bring evidence to this statement? For example there are several reviews regarding behavioral symptoms of people with dementia living in long term care (e.g. Wetzels et al 2010; or Seitz et al. 2010). The authors should describe more precisely what is known about the topic and what gaps are addressed by this study. Is this for example the issue that there are no data from Austria or Czech Republic until now?

3. Please describe more in detail the objectives of the study. „To explore information" is very unspecific. Formulation of research questions may help the readers to understand which gap is addressed in this study. After reading the manuscript i have the feeling that the manuscript is mainly about the differences and similarities between the two countries. If it is true, please explain why it is important.

Methods:

4. I recommend starting the section with a clear description of the study design. Is this manuscript the main result paper from your DemData study or is this a kind of secondary analysis of data from this project? Against the protocol i think that the manuscript focuses only a part of the data from DEMDATA. For this reason, it would therefore be important to clarify which questions the main study poses and which ones are addressed here.
5. According to the protocol the study should be representative. Please provide more information about sampling procedure, sample size calculation etc.

6. I suggest to reduce the section "Data management" since it is well described in your protocol.

7. The outcomes/variables published in the protocol (Table 1) are missing in the manuscript. Is there a reason for that? Please state the reason for deviation from protocol.

Analysis

8. I think it is important to state which analyses are main analyses and which analyses were not

9. Please state if there are sources of bias and what was done to handle the problems. For example you have a selected group in CZ due to the charts analysis. How do you assess the influence (bias) on the results regarding the missing data?

10. How the authors managed the missing data? Is there a defined cut-off for imputation (calf circumstances?)

11. You have done a lot of tests. How do you handle the problem with multiple-testing?

Results

12. Since you manuscript is about dementia, it would be important to present the data in the table for this population, or to compare both - residents with and without „dementia". I did not found how you define residents with dementia. I know well the problem with the „diagnosis" in health care studies (see Palm R, et al. People with dementia in nursing home research: a methodological review of the definition and identification of the study population. BMC Geriatr. 16. 2016. p. 78.) and because of that it is important how do you define your population.

13. I suggest adding confidence intervals to the tables.

14. I miss information about the data distribution; is all data normal distributed?
Discussion

15. I suggest to structure the discussion alongside the research questions, highlighting the main results.

16. Line 408-409, p. 17: which data indicate that social activities are not systematically implemented or specifically conceptualized? I did not found data on this in the result section.

17. Due to the problematic of team membership, I am not sure how informative is the comparison of the team ratio. If the social worker are a part of the team in CZ than this will increase the team ratio. This issue has to be discussed in context of tasks of the particular team members and should not be solved only by excluding the social worker, I guess.

18. I am convinced that the diagnostic practice and medical services should be careful improved but I think that the differences in the numbers might me also there result of inadequate "dementia diagnostic" on both sides - medical practice and the research measurement procedures (see point 12). As you mentioned dementia diagnosed needs more that MMST or GDS. Thus the conclusion regarding the "true" state of the residents should be interpreted with caution.

19. I miss the discussion, if the instruments you have chosen for your study are the right one. For example Behave-AD is developed and validated for home care and not for nursing homes- I guess that there are not language specific psychometric studies for the particular instruments and this should be considered as a source of bias.

20. What are you recommendation for future research bout the methods your used - what was successful and what should be reconsidered?

21. I think that the differences between the both countries make visible that the translation of research between different countries should be carefully done. Yes, we can learn from each other but we should be also clear about the differences in which have significant impacts for example on effectiveness of services and interventions.

22. Please provide information if the representativeness was reached and how generalizable are the results (according to your critic in the background)

Final remark: consider the use of STROBE statement for the revision of the manuscript.
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.

Unable to assess

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 recommend additional statistical review

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

Needs some language corrections before being published

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