Reviewer's report

Title: Adherence to treatment and related factors among patients with chronic conditions in primary care: A cross-sectional study

Version: 1 Date: 23 Jul 2019

Reviewer: Eric Kam Pui Lee

Reviewer's report:

Thank you for this opportunity to review the manuscript. This is a cross-sectional study to determine the proportion of patients with chronic diseases who had good drug adherence and associated factors in primary care in Spain. It is generally well written, however, Introduction I think the knowledge gap needs to be highlighted more clearly. The authors are correct that the subject of drug adherence has been extensively studied, especially for individual chronic diseases; and these studies found different important factors. And then the author said that things may be different for people with multiple diseases and these diseases may interact together. And that Spain had highest prevalence of multimorbidity. (i) If things are different for people with multiple diseases, then only people with multimorbidity should be included in this study. But this is not the case If there is any pre-specified hypothesis or aim, this should be made clear in the introduction or objective section. No primary or secondary objectives were listed.

Population and sampling

Despite the author said "we accepted an expected proportion of the participants not adhering to prescribed medications of 75% [23,24]", this is not consistent with the hypothesis the authors are having. In the introduction, they have said that "only half of patients with chronic conditions, however, take their medications as prescribed" and in the discussion from line 292 to 302, most of the previous studies found that the proportion of good adherence is around 39-50%. The choice of using 75% with a confidence interval of 5% (rather wide), and that the results of proportion of good adherence in this study of around 50% has made this study underpowered. As this cannot be changed, this must be discussed as one of the weakness of this study.

Outcome measurements

As the primary outcome is drug adherence (I suppose), the author rather need to justify strongly why other drug compliance detection method is not used, e.g. detection in blood stream/urine, automatic detection bottle etc. Specificity of around 40% should not be considered as GOOD psychometric properties as said in discussion section.

Discussion

The authors need to highlight what new knowledge has been generated. The proportion of good adherence is similar to previous study and it is not surprising that good knowledge leads to good adherence.

Minor comments, some sentences need clarification: on line 134, "after screening, research assistants randomly approached potential participants presenting..."; what's the screening about? - on line 254, "the level of high adherence to treatment according to.... was 55.5%". This is not easy to be understood. Perhaps, may consider use the word "the proportion of patients with high adherence...."

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.

No

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

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