Reviewer's report

Title: Treatment received and treatment adequacy of depressive disorders among young adults in Finland

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Reviewer: Ana Fernandez

Reviewer's report:

This manuscript aims to describe the care for depression that young adults receive in Finland. Although the topic is not novel, the fact that the authors used information coming from administrative records linked with information coming from epidemiological interviews is innovative and laudable. Most of the papers on treatment of depression used information from administrative databases or form surveys, but to the best of my knowledge, few of them have linked both. This is one of the major strengths of the paper.

Overall it is well presented, coherent and easy to read. Authors provide detailed data that is useful to understand the treatment of depression in Finland. I have enjoyed reading the paper.

I only have comments, that can be classified as "minor essential revisions"

Introduction:

- I encourage authors to justify why it is important to study the proportion of minimally adequate treatment. What are the outcomes associated to this? Do people who receive a minimally adequate treatment recover faster? Do they have better outcomes? What the evidence says?

The paper by Hepner et al is a good starting point:


Method:

Overall, the method is clear. I just need some more clarification with regard:

- Figure 1: What happened with the 334 (1316-982) people that were not invited to participate? I have not been able to find this information in the body of the paper.

- Table 1: I recommend the authors to include the references that justify the use of these cut-offs (in addition to the reference to the main paper; as not all the readers would have access to the source)

- Definitions of minimally adequate treatment: please include in the definitions (lines 132-136) the time frame (i.e. within one year).
- I suggest the authors to move the limitations associated to the definition of adequate treatment to the discussion.

Results: are well explained and easy to follow. However, I would avoid to use the word "determinants" as it implies some type of causality. I think it is better to change this and use "factors associated to treatment and drop-out'.
On the other hand, I was not able to find in the table the 76.1% who have use any type of contact. I think it would be worth to include this information.
I would like to see how "age at the onset of depression" (treated as a continuous variable) was associated to the care received. The authors included this as a continuous variable in the logistic models, but this is the first time we know about this variable. I recommend the authors to include this variable in table 4. Related to this, I also encourage them to explain why they have selected these variables to be included in the final models. Is this selection theory-driven or data-driven (I mean, you included the variables that were statistically significant associated)? This should be explained.

Discussion: Discussion is also good and well written. However, I feel the authors are given to much importance to bivariate associations. I feel also that they should acknowledge that, from an equity point of view, it is good that none of the sociodemographic factors were associated to receive an minimally adequate treatment. I am not sure authors are right when they conclude that "services for the treatment of depression are not functioning efficiently because people with comorbidities do not have a higher probability of receiving adequate care". Authors are assuming that comorbidity is a proxy of severity when it may not be always the case. I recommend the authors to develop this conclusion and to justify it with additional evidence.

Finally, limitations related to the definition of "minimally adequate treatment" used should be acknowledge.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interests'