Reviewer’s report

Title: The introduction of the Practice Nurse Mental Health in general practices in The Netherlands: effects on number of diagnoses of chronic and acute alcohol abuse

Version: 1 Date: 10 Apr 2018

Reviewer: Thomas Zimmermann

Reviewer's report:

Dear authors,

thank you for the revision of your manuscript. You very much improved the presentation of your data and you've cleared a couple of misunderstandings. The figures are now much easier to understand.

Besides that I am not convinced regarding your argument about the pre-post-design of your analyses. Your method section itself delivers the strongest objection: You argue to use PN-MH post-implementation data over a certain time period (2011, 2012, 2013). As practices were free to implement on their own pace some practices implemented the PN-MH late in 2013, meaning they produce missing data. As you say, multilevel regression analyses can deal with it.

But: What you do for post-implementation data (treating missings from practices that implemented a PN-MH late in 2013 as MAR) should work for pre-implementation data as well. Treating missing pre-implementation data from practices who implemented PN-MH immediately in the beginning of the year 2011 as MAR. It would enable you to handle missings in a similar way as you handle it at the other end of the available time period.

At least you could have given it a try. As your results are quite contrary to what you expected (and I need to apologize as I did not quite understand this in my first response), as a researcher I'd like to know and understand better - and your data would enable you to at least approximate a potential pre-post-effect.

My suggestion would be to compare practices that had a pre-implementation period of at least six months (one time period in your design) with any time period post-implementation. In my point of view, after all, it should be easy to calculate this in the NIVEL-data (at least for a sub-group of practices) for pre-post-diagnoses P15 or P16.

I am now more convinced than before that you may not be able to answer your research question at all using routinely collected data that do not distinguish between incident and prevalent diagnoses.

I assume an artefact in the data that is not yet discovered or that is related to a certain way to collect NIVEL-data. I am not familiar with the NIVEL-data-collecting scheme, but maybe you get the chance to ask for one more year (2010) pre-PN-MH data - otherwise this research does not bring a serious
argument for or against a potential effect of introducing a PN-MH in primary care. Instead, it substantiates the argument not to use routine data to measure the effect of an intervention.

In the discussion section you interpret - on an informed basis - why this (counter-intuitive) result could have happened. But you don't ask whether routine data is a thorough basis to answer the research question at all.

Maybe the (decreasing) effect you report belongs to a phenomenon underlying this research, but having yet to be investigated: the interventional aspect of the practice nurse. Maybe therapeutic options were discussed. Maybe patients went into treatment much earlier than before without a PN-MH? Suppose, the decrease in diagnoses is a beneficial outcome of introducing a PN-MH?

Given all that, I can not yet recommend publication, I'll rather recommend the editor to ask a third reviewer.

Further minor annotations

I suggest to change the order in the methods section: Please put the ethical approval part last. Design, measurement and analyses should stick together.

On page 6 you write, that 155 of 187 practices were analysed. On page 9 at the end of the methods section you repeat this information and you explain why you included 32 practices less than you've originally got data from. I think you can delete the information on page 6. Maybe you even tinker with the idea to put this information on top of the results section, 😊.

In the results section (p.10) I would want to read at least one or two lines pointing at table 1 as you did with table 2.

Best regards,
TZ

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?
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I recommend additional statistical review

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