Reviewer's report

Title: Use of a self-rating scale to monitor depression severity in recurrent GP consultations in primary care - does it really make a difference? A randomised controlled study

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Reviewer: Péter Torza

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BMC Family Practice Use of a self-rating scale to monitor depression severity in recurrent GP consultations in primary care - does it really make a difference? A randomised controlled study

Depression is highly prevalent in primary care. GP's have a central role in the recognition, diagnosis and management of depression.

There have been only a few studies that had evaluated the effect of recurrent use of self-rating scales regarding depression so that's why the final result of this study could be interesting for the readers of the BMC Family Practice. It was very interesting (probably because of the not appropriate statistical analysis) that there were no significant differences between the intervention and control group in depression severity reduction or remission rate, change in quality of life, psychological wellbeing, sedative prescriptions, or sick leave during the whole 12-month follow-up.

I think it would be better if the employment status would be categorised as working/studying, unemployed or retired. I do not think that unemployed and retired patients should be in the same group.

If we look at the educational level my suggestion that it is better if they make 3 groups as lower educational level (primary school or vocational school), middle level (high school) and higher educational level (college or university).

If we look at the statistical analysis my first and foremost problem is the multiple comparisons situation encountered in the paper (more precisely, the lack of its handling). Table 2 represents 6 comparisons, Table 3 contains 3 and Table 4 represents 12. In addition to that, all three figures (from Figure 2 to 4) represent 3 comparisons, bringing the total to 30. When deciding at 5% significance level, 30 - independent - comparisons mean an expected 1.5 significant results even if there is no difference at all in any of the comparisons, and the probability of having three or more significant results purely by chance is 18.8%. Thus, even that is quite possible that all three significant results obtained by the authors are all Type I errors. The authors made no attempt to provide protection against multiplicity (even though low p-values indicate that at least a part of the significant findings would remain significant even after correction.) A far more serious problem is that they haven't mentioned it, not even in limitations: while it is not per se
unacceptable to perform so high number of comparisons (especially if they were prespecified), it should be made very clear to the reader that this is the situation, and results can be only considered exploratory, which need further confirmation.

Figures 2 to 4 represent very basic analysis, which should be made more sophisticated. It has two aspects, first, the visualization needs improvement so that we can obtain more information from the figures (258 patient even allows a spaghetti plot, or at least boxplots should have been provided instead of means etc.). More important is the analytical approach: simple paired t-tests should be replaced with more advanced methods, possibly such that handle all observations of the patients (and not pairwise). Mixed effects models [1] seem to be a logical choice in this situation. Locascio and Atri [2] and Gibbons et al [3] provide an accessible introduction to this topic (using examples from a close fields) in addition to the well-known textbooks from Diggle [4] and Fitzmaurice [5].

My opinion is that the submitted article needs major review but it is a good and well-designed study to be published in the BMC Family Practice.


**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.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
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No

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