Reviewer’s report

Title: Prevalence of mood and anxiety disorder in self reported irritable bowel syndrome (IBS). An epidemiological population based study of women

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Reviewer: Vladeta Ajdacic-Gross

Reviewer’s report:

This is an interesting epidemiological paper on the association between mood and anxiety disorders and IBS. The data came from a medium sized epidemiological survey with a sample size with some more than 1000 (female) participants. The analysis was well designed with respect to the state of the research and included extensions to differentiate the results (current vs. lifetime occurrence of psychiatric diagnoses and IBS; comparison of IBS with diabetes and hypertension; exploratory analysis with specific psychiatric diagnoses). A critical reading of the manuscript revealed a few major and several minor suggestions.

Major issues:

• The manuscript did not explain why this study is based merely on a sample of women. To my understanding, the Geelong Osteoporosis Study includes males and females. On page 16, last paragraph, the authors remarked that the “inclusion of women only obviously restricts the generalisability of our findings”. In fact, diverging findings in men and women might provide new clues to a better understanding of diseases which burden women more than men.

• In contrast to the analysis design, the interpretation of the results appears to be quite unidimensional. Firstly, it misses that not only psychiatric disorders but also IBS may represent heterogenous conditions. Secondly, the interpretation does not consider that there are hypothetically several different interrelations and causal paths, which may coexist. This may be due to the heterogeneity of the diseases, but also to different temporal sequence patterns. To my opinion, the conclusions are somewhat rash. I also wondered that the authors did not include hypotheses, which might be derived from their recent paper on nutrition and affective disorders (Felice N. Jacka et al.: Association of Western and Traditional Diets With Depression and Anxiety in Women. Am J Psychiatry 2010; 167:1–7).

Minor issues:

• The sample of this study is larger than in most other studies examining IBS and psychiatric disorders. However, with respect to the heterogeneity of these diseases even much larger samples would be needed. Thus, this study is now midway.

• The paragraph on page 5/6 ("Despite many studies ...") was difficult to read and might need some reworking: a) the studies with negative results were quoted
twice; b) the sentence next to last introduced a fourth issue (or should alternatively be moved to the second issue two)

• Dose-response relationship (page 14, paragraph 14): I guess that a nested model (differentiating the subgroups 1-3 vs. 4) would work at least as well as a linear or curvilinear relationship. Thus, the analysis paves the way for two quite different interpretations.

• The exceptional finding, that there was no association between IBS and bipolar disorder might turn out to be revealing in future studies and thus deserves eventually some more emphasis in the Discussion.

• Association of IBS and GHQ-12 (page 17): from a methodological point of view, this association is not surprising. It might be explained by the fact that summary scores often work better than specific variables in association analyses.

• Page 18, paragraph 3: This paragraph is misplaced between paragraphs discussing the associations. Eventually, it could be omitted.

• Table 1:
The first row has no labels and no overall figures in the first row. Please indicate also that the %-values pertain to the rows.

• Table 3:
The first row has no labels. Please indicate also that the %-values pertain to the rows.

• Table 3:
The title announces “lifetime IBS, hypertension and diabetes” but only the IBS figures were shown. Please provide the lacking figures.

• Tables 4 and 5:
To what do the %-values pertain?

Level of interest: An article of importance in its field

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.