Reviewer's report

Title: Socioeconomic conditions and number of pain sites in women

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Reviewer: Haitze Janko de Vries

Reviewer's report:

The subject is topical and contributes to our knowledge. The article was generally well written. However, in my opinion it needs major revisions to make it eligible for publication.

Minor Essential Revisions:

1. Abstract
   Use the abbreviation NPS consequently.
   In results and conclusion: SCI "score".

2. Introduction:
   1st line: … prevalence of health complaints like pain. Which pain do the authors mean? Acute pain, chronic pain, nonspecific pain, all kinds of pain?

   3. 2nd line: “… number of pain conditions is considered a better parameter in pain assessment”. I think the authors have to mention here why NPS is a better parameter for pain assessment (better predictor?) Only referring to the literature is not sufficient.
   Perhaps it is better to state that (moderate) evidence is available that NPS might be a better parameter.

   4. is considered as (or: is regarded as)

   5. 2nd paragraph, 2nd line: “We discovered … general population”. Does this mean that poor socioeconomic conditions is a predictor for cancer surviving?

6. Results
   I missed the descriptive information of the subjects. If this information has been presented in a former study, than may be referred to it.

7. Discussion
   The first paragraph of the discussion contained much repetition of results. It reads more comfortable if this paragraph is summarized.

8. last paragraph:
   I wonder why “a similar result compared to another Norwegian study” is a strength of this study.
9. Please explain why the cross-sectional design was a limitation.

10. In the conclusion is stated that there is a threshold in the NPS count. It would be convenient for the reader if the authors explain somewhere in the discussion what the (clinical) consequences of this finding may be.

Major Compulsory Revisions:

1. Abstract:
I believe two research questions interfere with each other.
   a) what is the association between socioeconomic conditions and NPS in women?
   b) is being a gynaecological cancer survivor related to more NPS?
   The second question probably could have been answered in a previous study of the authors. To answer the first question, it would be more credible to exclude the women who are cancer survivors.

2. Introduction
The research question should have been stated clearly.
   In addition, some information about the relevance of knowing the association between NPS and socioeconomic conditions is desirable.

3. Methods
For me there is a major concerning point in this study: Cancer survivors usually are very sensitive to pain for the obvious reason that recurrence of cancer may occur. So one might expect that prevalence and NPS are higher compared to the general population. However, this was not observed in this study, so the authors conclude that they can consider the cancer survival group as a general group with poor socioeconomic conditions. I wonder if this is an appropriate sample to answer the research question, because the results can in my opinion not be generalized to a whole population. For the purpose of this research question it may have been better to collect data from a poor socioeconomic area in a city or country.
   A solution may be to change the title into “Socioeconomic conditions and number of pain sites in female long-term cancer survivors”, and then carefully make suggestions of generizability to the general population. Or use only the women from the general population, the 493 are probably enough to do the analysis. The authors did not make it plausible that the cancer survivor group was really needed in this study.

4. I understand that the authors used a case control design for their former study (Rannestad and Skjeldestad, 2007). However, in the study under review, this design is not needed. There were no cases to be compared with controls, so it is better to not mention the case control design.

5. Logistic regression analysis was used to explore the relation between NPS
and socioeconomic conditions, with NPS as dependent variable. I recommend to apply linear regression (ENTER and not Forward) with socioeconomic conditions as (continuous) dependent variable. You can enter NPS as dummy variables into the model. In that case, table 4 can be reduced to 1 analysis, and should also present the standardized Beta and p-value.

6. A high Odds ratio of 16.9 was found in model C. However, the confidence interval indicated that this finding was not very precise. At least the authors should mention this in the discussion.

**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