Reviewer's report

Title: Spine Day 2012: Spinal pain in Swiss school children- epidemiology and risk factors

Version: 1 Date: 20 June 2013

Reviewer: Lise Hestbaek

Reviewer's report:

The manuscript focuses on back- and neck pain which is an important and under-investigated area. The manuscript is clear and well written – especially the discussion is well balanced. The authors should be complemented for making good use of the data available.

1. Is the question posed by the authors well defined? yes
2. Are the methods appropriate and well described? Almost (see below)
3. Are the data sound? yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? yes
5. Are the discussion and conclusions well balanced and adequately supported by the data? Discussion yes – conclusion could be moderated.
6. Are limitations of the work clearly stated? yes
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? yes
8. Do the title and abstract accurately convey what has been found? yes
9. Is the writing acceptable? yes

Major compulsory revisions:

1. I would appreciate more information about the questionnaire used. Was it a previously validated questionnaire? Was it pilot-tested (i.e., question 4 was ‘ambiguous’)? If it is not a generally known questionnaire, the wording should be stated in ‘methods’ or a translated version should be included as additional material.

2. Page 6 reads: “The chiropractors tested spinal mobility and….“ How was this tested? ROM, motion palpation or other?

3. Page 8: The overall chiropractic rating is reported. I don’t see the relevance/interest of this information if it is not related to the children’s pain.

4. Results, Risk factors: I am not impressed by the summary of the findings on pages 8-9. First of all, the reeling off figures – which are also reported in the tables - is difficult to read and does not provide the reader with an overview. Secondly, with 7x11 OR reported, you must expect some chance significance. Therefore, I don’t feel confident with a summary almost entirely based on
statistical significance. You could f.ex. summarize the data by risk factor: “….Increase in age was consistently found to be associated with increase in all types of spinal pain, with odds ratios ranging from 1.17 for NP and TP to 1.44 for spinal pain in more than one area. This was significant for all outcomes except TP…….(likewise for gender, parents’ spinal pain and parental smoking)………BMI and mobility consistently showed odds ratios around 1 but no other factors demonstrated a consistent pattern, and only the odds ratio for trunk asymmetry in relation to LBP was statistically significant. However, considering the large number of analyses and the lack of pattern, this might be a chance finding.” Or some other kind of summary, making it clear that four factors: age, gender, parental smoking and parental SP seem to be of interest.

Minor essential revisions:

1. On page 5, it is stated that information about age was missing in 11 individuals. Were they excluded?
2. Page 6, I don’t understand the sentence: “…as this study aimed to identify valid and reliable screening tests that can be used in future in school settings, these tests were not included in the analyses…. ” If that is the case, it must be the issue to compare the results of the test to the children’s pain reporting? I miss an explanation for including some clinical findings and not others in the analyses.
3. Page 6, last line: “(enter method)”: Could you explain what this means? Looking at the results, it doesn’t seem to be stepwise inclusion, which was my first guess.
4. Page 6, last line: “categorical factors”? They seem to be dichotomous variables.
5. Tables 5 and 6 could be combined.
6. Page 7: “In order to minimize the influence of age, FFD was normalized and expressed as a percentage of height.” Could you explain why you express FFD as a percentage of height or include some references for this method?
7. Page 19: In the discussion about BMI, the risk of chance findings should be mentioned.

Discretionary revisions:

1. I think Table 4 should be redesigned. There is too much text in the cells.
2. What does “(for review)” mean in relation to references 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