Author’s response to reviews

Title: Neck and back problems in adults with idiopathic scoliosis diagnosed in youth. An observational study of prevalence, change over a mean four year time period and comparison with a control group.

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Author’s response to reviews:

We thank reviewer # 1 for the constructive comments. We give the additional information below:

Remark 2. “Controlling for confounders is really relevant, and only a part of possible confounders have been addressed”.

Answer: It is possible that other (unmeasured) confounders than sex, smoking and age could have a role. We found it reasonable to adjust for these variables. Other possible covariates could have been employment status and occupational strain, but these did not differ between individuals with and without scoliosis. No change made in the manuscript.

Please comment on this point in the discussion.

Authors’ additional answer: Thank you for the comment. The second to last sentence in our answer above is incorrect and should read: “Other possible covariates could have been employment status and occupational strain, but occupational strain was similar in the scoliosis and in the control group, and a slightly higher proportion of individuals in the scoliosis group were gainfully employed (as reported earlier by Grauers et al, Spine, 2014- reference 3 in the paper)”. This indicates that the effect of neck problems on the work strain and ability to work is small. We have added the above information on page 11, paragraph 1, lines 232-234. We have also added a sentence on page 12, paragraph 2, lines 258-259.
Remark 4. "The question used to assess neck and back problem doesn't allow to differentiate between acute, subacute and chronic pain. This must be disclosed and discussed, and limits also the comparability with literature data that are cited by the authors. Please discuss also this point".

Answer: Arguably the question might look at first vague regarding neck and back problems but we would like to stress that our focus was on problems in general where pain is certainly a big component of this issue -problems- but not the only one. Pain specific questions were neither addressed to this cohort nor analyzed. The interesting point of this survey was to cast a light whether scoliosis has any association with disturbance in the cervical portion of the spine and if that is associated with any kind of activity levels. We have mentioned that in the text, line 114. Data is also available in table 3.

Sorry, but both from a scientific and clinical perspective this is a big limit of this study. Acute, subacute and chronic spinal pain are totally different, being the first a biological problem, the latter a biopsychosocial issue, with the subacute phase as a transition from one to the other. These different conditions have different impact on QoL, different therapeutic approach and different social costs. So it's extremely relevant to differentiate among them, as usually happens in scientific literature. It seems that the authors aren't able now to differentiate, so I suggest to discuss this point in the limits of the study.

Authors' additional answer: Thank you again for your comment. We have added this as a major limitation on page 11, paragraph 1, lines 230-232 and lines 232-234. To make this part fit into the discussion we moved and slightly changed the wording in one sentence (now on page 11, paragraph 1, lines 228-230).

We would also like to thank reviewer # 2 for the time spent commenting our article.