Reviewer’s report

Title: Development of the Young Spine Questionnaire

Version: 1 Date: 28 January 2013

Reviewer: Henrica C de Vet

Reviewer’s report:

This manuscript describes the development of the Young Spine Questionnaire. The authors have followed a stepwise approach, which facilitates the understanding what they did in each step. They distinguish a development phase and testing phase and pay attention both to the questions and the answering categories. In the end they present data about prevalence of spinal pain and agreements between questionnaire and interview data.

Major compulsory revisions

Conceptual model and included concepts

The authors refer to the model of Wilson and Cleary. It is not clear though how all the aspects of the questionnaire fit within this model. The ICF model might have been equally, or even better, suitable. For example quality of life, which is part of the Wilson and Cleary model (not of the ICF model) is not measured. Is the Wilson and Cleary model the best one to mention? If so, please explain how all the aspects between questionnaire and model corresponds.

The authors want to measure the prevalence of spinal pain and the severity. In order to assess the severity of the pain, they not only inquire about the pain intensity, but also about the consequences as activity limitations, seeking health care. In addition they ask questions about their parents’ back pain. I question though whether the aspect of perception of back problems in their parents should be part of the questionnaire. It is known that these might influence spinal pain in children (and how this is dealt with), but that is one of the research questions that can be studied using the YSQ, but is not necessarily part of it.

The authors do explain why it is important to have knowledge about the spinal pain in children, i.e. because children with spinal pain will more often report back pain in adult life. In that case prevalence would be important. Why do you want to know the severity as well. You might address this in the introduction. Is there an intention to treat this spinal pain in children?

Is this an ‘instrument’ or a ‘well designed survey’?

No total scores are generated. All items are reported separately, so there are no scores resulting from this instrument. So it is a set of questions relevant to get information about the prevalence and intensity of spinal pain in children. I don’t think you label this questionnaire a measurement instrument. I would say that this is a ‘well designed survey’?
Development

The authors nicely describes the various phases and indicate how the questionnaire develops from YSQ-1 to the final version. It would be informative to use this numbering also in the results section and under statistical analysis and certainly also in the Tables. It is informative to know which (preliminary) versions from the questionnaires were used to collect the data.

I can imagine that the authors want to use the data they collected in the test phase to give some information about the prevalence of pain and about the agreement between questionnaire and interview. However they are still developing the questionnaire (the only aim mentioned in the Introduction). Disagreements between interview and questionnaire are primarily used to adapt the questionnaire. So in comparing the questionnaire and interview data, the assessment of agreement is not the primary aim, the aim is to find questions or answering categories which are difficult for children. I question whether the results about the agreement are informative. Certainly the kappa values are not. More important is your information in the text about which questions were problematic and how you have adapted these.

Having collected all these data I would say it is interesting to present the data about the prevalence. However, the authors should point out that they used preliminary versions. They should include this under Statistical analyses and with the presentation of the Tables. Moreover they should mention this as an important limitation in the discussion. They might also point to which data (questions) were about similar in the final and previous versions. In this way they can indicate which presented data might (more or less) deviate from data collected with the final version.

They conclude that the questionnaire is valid. They can’t conclude this in this manuscript. They only considered the content questionnaire. If the idea is to consider the individual items as scores, then this is not a multi item instrument, but a set of individual items which have to be validated separately. For example, do the pain rating correlate with the severity of consequences. If not, which answers convey the truth?

Discussion:

The section about ‘School. Leisure and family’ might become part of the Methods section. It is more a justification why it is an aspect of the YSQ than a critical discussion here.

Minor essential revisions

Page 8, 1st line: do you mean isolated in a room, one by one, or were the children in the room together and was the discussion about the drawing one by one?

Page 10: I would start the results section with the cross cultural translation and then give the results. Or is there a reason why you report on this process in the end of the Results section?
Page 11, 6th sentence from bottom: I don’t understand why rightly identifying the
neck would improve the other identification of the other areas.

Page 12: No point estimates were found for comparison. Doe you mean that
other papers did not present point estimates or that you could not find papers
that reported point estimates similar to yours.

Page 12, line 4 from below: .. should be more focus on frequency AND
DURATION?

Page 12, line 2 from below: … the rFPS AS a measure of pain intensity

Page 13, line 4: instead of …. ‘abstract concept of possibility’, I would say ‘limited
experience of pain intensity’.

Page 13: forelast line I would change valid as a reference to content validity.

Please indicate in the Tables which version of the questionnaire was used to
collect the data.

**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