Reviewer’s report

Title: Generalized Joint Hypermobility in childhood is a possible risk for development of joint pain in adolescence, a cohort study

Version: 1 Date: 30 September 2014

Reviewer: ASHRAF EL METWALLY

Reviewer’s report:

General comment: The article explored an important research question about the relationship between hypermobility and pain in children. In consistent results has been reported by previous studies, which might be related to limitations of study methodologies. The study design used in this study takes into consideration the limitations of previous studies and I think would be of interest to researchers in the field of pediatric pain. The research group is specialized in hypermobility and this is another positive point as the methods in this study clearly shows that the high level of validity in the assessment of hypermobility among children. I will divide my comments according to manuscript sections.

The following comments are major 2, 4, 6, 7, 13, 14, 15. Other comments are minor

Abstract

1- "Generalized Joint Hypermobility (GJH) is a risk factor for pain persistence". This is based on only one study, I would say "there is some evidence that….."

2- "and to re-examine their current GJH status and physical function" this has nothing to do with the background sentence. I would add another sentence before this to justify this aim.

3- "among Danish adolescents previously…." I would remove this as this is mentioned later in methods

4- "All children (n=301) were re-examined at 14 years". Reexamined means that they were examined before that time. No mention of the first assessment in the abstract. If you write reexamined, them you need to tell the reader about the first examination.

5- "GJH in childhood (eight and ten years) was a threefold (non-significant) risk factor". I would rephrase it. "children with GIF had three times higher risk of……..although this association did not fully reach statistical significance (95% CI….)

6- "This study indicates a relationship between GJH and joint pain in adolescence both as a contributing and a predictive factor for pain development. Further, adolescents with GJH had lower self-reported physical function and higher BMI, but currently with no influence on measured physical function" . I would say "this study suggests a possible link between ,.... And ...... The study also shows that ....... Remove "but currently". I would add at the end, "future
studies with a bigger sample size is needed to confirm such findings"

Introduction
7- Same comment as in abstract. The study has two aims, all background text is about the first aim and not the second. Please add a background paragraph for the second aim
8- Language checking and editing by a native speaker would improve the clarity of information.

Methods
9-Clear to me and good methodology, stat analysis plan seems reasonable. Only comment is language editing to improve clarity.

Results
10-Line 211. It says "and therefore no adjusted model", not clear what it means
11-Line 220: "There was non-significantly lower vertical jump height in children with GJH" do your mean statistical significance? In that case it should be written it was lower in children with GJH. However the difference was not statistically significant (P =,,,,)
12- Review by native speaker needed to improve clarity although results in general adds to our understanding in this field of research

Discussion
13- First paragraph. We have to standardize this. If you say was predictive it means it reached statistical significance. If it did not reach significance, then you have to continue the sentence by saying although this association did not reach the predefined level of statistical significance.
14- Study limitations: the width of confidence intervals in the study is big. There must be an issue of statistical power to answer the research question. This should be discussed in the discussion section, why the CI is wide? Please justify this.

Conclusion
15- Please see comments in abstract. The current conclusion does not give guide for future research. Please add recommendations based on your results, I would add future bigger studies are needed to confirm results.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
No conflict, never worked with this group