Reviewer’s report

Title: Increased number of somatic pain sites is associated with poor mental health in 18,104 adolescents: a cross-sectional study

Version: 1 Date: 3 July 2012

Reviewer: Norio Mori

Reviewer’s report:

This is an interesting study. The authors observed significant associations of the number of pain sites with depression-anxiety and perceived academic impairment in the cross-sectional analysis in a fairly large sample of adolescents. The results suggest that adolescents who complain pain in several sites may have difficulties in their mental health and school life even when they never complain of their mental health problems. This might make a simple but good probe to detect students with potential mental problems for education/mental health professionals, even when the students do not complain mental and academic problems and do not seek for any help by themselves.

The authors may however be noted of the following critical issues to improve their manuscript.

1. Rationale why they focused on “the number” of pain is not adequately described. To claim that “the number” of pain is a useful sign, this is essentials.

2. “Academic impairment” and its perception by students (“perceived academic impairment”) may not be the same. The authors’ descriptions may be a little confusing regarding this, in the introduction and discussion. They should be corrected. Also, more elaborate explanation is required why they focused on the association of the “perception” and somatic pain.

3. Information regarding the perceived academic impairment (or poor concentration and frustration due to challenges in the academic performance) in their samples is not adequately given. In the results, it appears only in Table 4, not in other Tables. This makes an abrupt impression. More information should be given, probably in Table 1 and in the text regarding the perceived academic impairment.

4. Perceived academic impairment was evaluated using simple questions. This may be noted in the limitations.

5. In the section 4.4, the authors showed four possible pathways for the association among pain, poor mental health and (perceived) academic achievement, including one where absence from school plays a role. In this case, the authors should describe whether the subjects included students who are long-term absent from school and they played a significant role in the association.
6. The reason why the neck/shoulder pain was selected as the third site of pain should be elaborately explained.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interes.