Reviewer's report

Title: Reliability and validity of a novel quality of life questionnaire for female patients with adolescent idiopathic scoliosis: Scoliosis Japanese Questionnaire-27: A multicenter, crosssectional study

Version: 1 Date: 08 Feb 2018

Reviewer: Doug L. Hill

Reviewer's report:
1. The statement that "All eligible female participants diagnosed with AIS in each institution were invited to participate in this survey, and this study was conducted from July 2009 to June 2011." needs further clarification. How many eligible patients were there in these 24 centres over the 2 years? The sample size suggests that a low proportion of the eligible patients actually took part in this study which may lead to selection bias. Six centres enrolled less than 10 participants over the study period.

2. Since the purpose of this study was to develop a novel patient-reported outcome measure for Japanese female patients with AIS and to evaluate the reliability and validity of this questionnaire in comparison with the SRS-22 tool, I would like to see more comparisons to the SRS-22 such as floor and ceiling effects for each domain and to see if the scores can discriminate between treatment groups.

3. The responses are clustered near the lower end of the scale (as illustrated in the response letter) which suggests the participants have a relatively mild impact due to their scoliosis. I would like to see the responses separated by treatment groups (observation vs brace vs surgery) for both the SRS-22 and SJ-27.

4. Include in the paper the rationale for reversing the scoring from the SRS-22 where a higher score is better outcome compared to the SJ-27 where a lower score is a better outcome. Also include the lowest score for a question in the SJ-27 is 0 where the lowest score in the SRS-22 is 1.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes

Are the conclusions drawn adequately supported by the data shown?
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