Author’s response to reviews

Title: Quality of Life and Patient Satisfaction in Bracing Treatment of Adolescent Idiopathic Scoliosis

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Reviewer reports:

Reviewer #1:

1. There are still some grammatical and typo mistakes.

Corrections have been made. Thank you.
2. More detailed elaboration of the process of translation from Greek to Spanish is needed. What validation procedure has been done? How many subjects were included?


Translation to Spanish, subsequence translation to the English language and subsequence translation to Spanish was conducted by three different specialists and validity and reliability procedures were conducted. And thereafter the Director of Education and Research Department al the Hospital delivered the validated questionnaire in Spanish in order to be use with our patients.

One of the limitations is that we could not get the Greek original article due to BMC Springer Online says that could not be found…. Link as follow… [http://www.biomedcentral.com/content/supplementary/1748-7161-1-7-S1.pdf] nor Medline/Plus, Pubmed, Scielo, Scopus, Cochcrane hold any registered link of that article.

3. More subjects should be recruited in order to allow meaningful statistical analyses for evaluation of quality of life of the subjects.

We do agree. Is has been noted as one of our limitations. Unfortunately in our hospital we have many other entities related to spinal disorders such neuropathic, muscular, congenital, and tumor. Thank you.

Reviewer #3:

1. Thank you for the opportunity to read the study. Main idea is clear.

Thank you.

2. ABSTRACT

- Inaccurate, e.g: MATERIAL AND METHOD section - no information about: age of the patients, mean and SD, no information about the Brace Questionnaire -BrQ- which version was used original one, validated?
Corrected. Thank you.


And from that starting point the Hospital Education and Research Department took responsibility of the validation process to our local language. Same as reviewer #1. It’s quoted in the manuscript.

3. RESULTS- 43 girls and one boy, why did you decide to include boy?

They were consecutive patients. We believed that one boy would not make any different and in the other hand is a truly representation of daily practice treatment in a truly demographic situation in AIS patients with brace. See Weinstein reference #1. 2013. One of the most important and interesting paper in published literature.

4. INTRODUCTION

- Lines 70-73 please add references

Done. Thank you.

- Previous pertinent literature mostly only cited not discussed (Lines 74-78)

Done. Sorry you are right, thank you again. Corrections have been made to the manuscript discussion. See new references quoted.

Please see Discussion… Weinstein, Danielsson, Kinel, Climent, Friedel, Lindeman, Korovessis, Richard, Katz, Vasilaidis, McLean, Simony and Grivas…

- Conceptualization and rationale of study not clearly apparent

Adapted to the manuscript. Hope you find the corrections appropriate.

- General aim of the study- clear
5. MATERIAL AND METHOD

- Study design appropriate to achieve study objective

Thank you.

- Study population not clearly and adequately described (one of the inclusion criteria could be a gender-in described group is only one boy)

Actually we believe that one boy would not influence in the results of a 44 population results therefore we did not consider the idea of exclusion. We believe it is totally normal demographic situation to have boy/s in a normal population using brace if needed. See reference #1 Weinstein et al 2013. He included in his study girls and boys to enlighten the effectiveness of the treatment

- Unclear Validation process of the BrQ questionnaire, please add references

Same as above.


Quoted in the manuscript.

Translation to Spanish, subsequence translation to English language and subsequence translation to Spanish was conducted by three different specialists after that validity and reliability procedures were performed. And thereafter the Director of the Hospital Education and Research Department delivered us the validated questionnaire in Spanish in order to be use with our patients.

Thank you.

- Please specify how interpret results of the BrQ questionnaire
Done. BrQ is a validated, a disease specific instrument, it works with score ranges from 20 to 100 and higher BrQ scores would be associated with better quality of life.

Included in the manuscript. Line 131-3. Line 165-8.

- Statistical analyses not used

Sorry about that.

6. RESULTS

- Results are very general, without bringing new knowledge

Sorry you see it that way.

- Text does not duplicates figures

Sorry but we don not agree with your last statement. We do see that figures have same ‘numbers’ that you can see in Results. We appreciate the comment. You might even considered these dis-aggregated domain results that perfectly represent BrQ results turned into figures.

7. DISCUSSION

- Previous pertinent literature critiqued

Thank you.

- Similarities and differences to other studies noted

Thank you.

- Limitations of study noted

Thank you.
8. CONCLUSIONS

- Clearly stated

Thank you again.

9. REFERENCES

- Relevant and comprehensive

Thank you. We appreciate the time invested in our potential paper taking you away from your daily responsibilities.

Reviewer #4:

I read with interest this manuscript, which highlights the negative impact of the brace treatment and suggests that surgery is the best solution and has less impact on the quality of life than bracing.

We do not agree with that statement. We do not suggest to go straight to surgery at all. We believe that orthosis has a tremendous chance to work, 70% according to some literature or so (Weinstein et al 2013, reference #1), and we always go for it when indication is proper. We do not know why we should not give it a try since it has been largely demonstrate that could work. Sorry if the paper gave you that idea. The aim of the study is… Lines 93-95… ‘’The aim of this study was to assess quality of life and treatment satisfaction of the patient undergoing bracing treatment for AIS of a pediatric hospital’’.

1. Wearing a brace effectively affects the quality of life for about 2 years, surgery affects the quality of life throughout life and 3 interventions are often expected. Wearing a brace is certainly a challenge for a teenager, but there are also positive psychological aspects. The brace protects the teenager as an armor and helps to structure his personality. When we look at the long-term results of conservative treatment, we find that overcoming bracing during adolescence improves social and professional life in adulthood...

Thank you for your comment. Agree 100%. We encourage teenagers to use their brace 18hs/day and till skeletal maturity whenever is possible. We agree that psychotherapy could be helpful in these cases.
2. Bracing does not improvise and is a team work. In principle, no bracing without physiotherapy. We have no idea about the team that supports the teenager and his family. Is it a surgeon or a MD specialized in bracing that supports the patient? What about physiotherapy?...

Totally agree with you again. We have a surgeon (who actually is a MD) and orthosis technician that are specialized in bracing that supported every patient. Team work all the way. Thank you for the comment.

3. Other teams have used the BrQ and the interest of a questionnaire is to compare the results. It should be a comparison with Vasiliadis, Aulisa, Chan, Kinel ... Many medical and surgical treatments affect the quality of life, this is not a reason to suppress the medical activity. The same test should also be performed on a child with a spinal fracture brace.

Absolutely agree again. One reason is to assess clinical or psychological implication of any treatment and another idea is omitting treatment due to extremely affection of QoL… we believe that is not the case of brace treatment. We included a Kinel et al and Vasilaidis et al interesting paper’s ideas and interesting conclusions in our paper Discussion as you requested. See lines 192-5 and 237-45, respectively.

4. It is also necessary to discuss the quality of life of untreated scoliosis which is also disturbed. The evaluation is carried out by generic tests.

Agree once again, even though that’s not the aim of the study. Limitations were noted in Discussion. Thank you!. We totally support brace treatment.

5. What are the percentages quoted? Where is the cut off on the nominal scale of 5 responses.

We have to say that 100% of our patients felt committed to the study and responded the BrQ at the end of a regular surgeon’s office appointment.

We truly believe that the BrQ is a extremely good tool in assessing HRQoL in a AIS patients, it is true that from time to time choosing between 5 potential responses might be somehow tricky but still a very good and reliable tool to use.
6. What is the average correction in TLSO brace? A correction of less than 20% does not produce good results and the inconvenience of the brace is greater than the benefits.

In conclusion, it is necessary to specify how the results quoted are calculated, to place the results of the BrQ compared to that of the other teams, to evaluate the effectiveness of the proposed treatment and to insist on the environment of the brace.

The correction rate in our population using brace in AIS was between 39-48%. According to literature that is considered to be acceptable.

The way to calculate results was quoted as previous reviewers also requested and taken care in the manuscript. We actually do not have any different group or team to make comparison therefore we could not say for sure how would it works. Even though there is no comparison group we deeply encourage our teenagers to use the brace as an effective method to treat AIS and potentially prevent surgery.

They could have a tough time using it but when we asked them is they would use it again if they could get back in time… 94% said YES.

Appreciate your kind interpretation and concern in our manuscript.