Author’s response to reviews

Title: Two-dimensional digital photography for child body posture evaluation: standardized technique, reliable parameters and normative data for age 7-10 years

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Author’s response to reviews:

Dr Theodoros B. Grivas
Editor-in-Chief of “Scoliosis and Spinal Disorders”

Thank you for the review and comments regarding our manuscript titled ‘Two-dimensional digital photography for child body posture evaluation: standardized technique, reliable parameters and normative data for age 7-10 years’ written by Lukasz Stolinski, Mateusz Kozinoga, Dariusz Czaprowski, Marcin Tyrakowski, Pavel Cerny, Nobumasa Suzuki and Tomasz Kotwicki.

The answers regarding the review have been enlisted below. In order to facilitate the assessment of the changes made in the revised version, they have been highlighted in grey and pink.

Reviewer 1

This is a simple but a well presented study which will have an impact on clinical practice. The authors provide enough information which outlines the due diligence within this study. Whilst I don't have a lot of technical criticisms and issues, I would like the authors to consider the following which mostly relates to presentation issues. I think this will improve the readability of the manuscript and its reach.
AD1. Please revisit the abstract. Remove the aims from the methods. As it stands, the abstract doesn't do justice to the work you have completed.

We agree with the comment. The abstract has been modified accordingly.

AD2. Your overall aim is to present a structured method for recording posture and its changes using digital photography. This is clear and you have achieved it. However, because of the way you have presented your introduction, it loses focus. I like using subheadings - please revisit this section and remove descriptive sentences and include a clear critique which highlights the need for such a study.

We agree with the comment. As the Reviewer proposed we moved some part from introduction section to discussion. We used subheadings when we presented this part of the text in discussion as proposed by the Reviewer.

AD3. In terms of methods, please consider moving some of the figures and the description to supplementary material which will keep the reader interested.

We moved some of the figures and the description to supplementary material which could keep the reader interested.

AD4. In terms of section 3.2; again please consider providing an overall table and move individual tables to supplementary section.

We agree with the comment to provide an overall table and move individual tables to supplementary section from section 3.2. The manuscript has been modified accordingly.

AD5. I suggest you revisit and move section 3.3 as a part of discussion - this will improve the flow of the paper.

We agree with reviewers comment to move section 3.3 to the discussion section. We moved section 3.3 as a part of discussion.

AD6. You currently have two discussion sections ? My suggestion will be to combine some of 3, 4 and 5. This will improve the paper enormously. In addition the conclusion section needs to be part of this too. In my opinion, I don't think you need a conclusion section for the paper. You are not concluding anything - you are describing a method for others to use. If you want to keep it - please make is succinct and indicate that you have developed and validated a tool.

We agree with the comment about two discussion sections in the manuscript. We combined 3,4,5 sections. Conclusion section was united with the discussion section.
Reviewer 2

The authors submitted an interesting manuscript trying to standardize the significance of photographic assessment in body posture. Although their results are considered important and a large number of children were included in the study, there are severe violations in the structure and the presentation of a scientific paper.

AD1. First of all, in the abstracts the use of numeric is not common. I would recommend to replace the numbers with commas.

We agree with the Reviewer comment, that the use of numeric in the abstracts is not common. We replaced them by commas.

AD2. In the abstract the material and methods paragraph, the applied methodology must be described. Surprisingly, the authors are describing the aims of the study!! The purpose of the study should be analyzed in the objectives/background paragraph.

We agree with the comment and the manuscript has been modified. The purpose of the study was analyzed in the background paragraph.

AD3. The introduction section is too long. Usually, a brief description of the current literature that triggered the writing of the manuscript is used in the introduction paragraph. Moreover, an extensive literature review is suitable to the discussion section. For example, in page 5 the lines 127 to 135 can be easily moved to the discussion section.

We agree with the comment, and we moved a part of the introduction text to the discussion section. We prepared united discussion section compared of parts commented by the Reviewer. The manuscript has been modified accordingly.

AD4. The materials and methods sections and the results section are very confusing. When we discuss about methods, all of our methodology must be extensively described in the methods section. Unfortunately the authors are analyzing many parts of their methods in the result section. For example the statistical analysis paragraph has to be incorporated in the methods paragraph. Similarly, the institutional approval and the statement that the study is conducted according to the 1964 Helsinki Declaration, must be written in the methods section and not to the results.

We agree with the comment that all of our methodology should be extensively described in the methods section. The manuscript has been modified accordingly and we prepared the methods section including only methods and the results section including only results. The statistical analysis paragraph was incorporated to the methods paragraph.
We agree with the comment the institutional approval and the statement that the study is conducted according to the 1964 Helsinki Declaration should be written in the methods section and not in the results. The manuscript has been modified accordingly.

AD5. As the study has been approved by the ethics committee of Poznan University the registration number must be included if applicable.

The study has been approved by the ethics committee of Poznan University and the registration number was included.

AD6. The aims of the study have to be described in the introduction paragraph.

We agree with the comment and the aim of the study was described in the background paragraph.

AD7. All the images must be included in the methods section.

We disagree with the comment that all the images must be included in the methods section. The manuscript has been modified and most of the images were moved to this section. We couldn’t move to this section the part about pitfalls and sources of errors of photogrammetry for posture evaluation because it was a part of our results based on studied material.

AD8. In page 9 the clinical method of calculating the TBF angle was firstly described by Cheng et al. As the authors previously referred to the introducers of all clinical methods, it is appropriate to add this reference, too.

We agree with the comment that the clinical method of calculating the TBF angle was firstly described by Cheng et al. The manuscript has been modified accordingly. These references were added to the manuscript and reference list.

AD9. There are too many images. 56 is a large number and it could be tiring for the manuscript reader. I would recommend merging them in no more than 15 images.

We agree there are many images (56) in the main manuscript however the suggested number of 15 seems us not sufficient to illustrate the main messages of the manuscript. It is technically very difficult for the authors and very confusing for the reader to put together all photographic parameters on one image, or to put together all pitfalls on one image or to compare parameters presented previously by different authors with one image. We moved some of images to the appendix. The manuscript has been modified accordingly and we reduced number of figures.
AD10. The results section must contain only results. Nothing else.

We agree with the comment and the manuscript has been modified accordingly.

AD11. The tables must be merged as well.

We partly agree with the comment that the tables must be merged. It is not possible to merge all tables in one. The manuscript has been modified accordingly and we reduced the number of tables.

AD12. There are two discussion sections (!!!). I am sorry but I haven't met it before. I think that the discussion sections must be united.

We agree with the comment about two discussion sections in the manuscript. We combined 3,4,5 sections. The manuscript has been modified accordingly.

AD13. Despite the fact that the authors describe their findings/experience in detail, a more extensive comparison with literature findings could be useful. Furthermore, many parts of the manuscript have to be moved in the discussion section.

We did perform an extensive comparison with literature findings by citing the seventy published studies which were based on digital photography technique and the photogrammetry and which were published in international medical journals. We moved parts of the manuscript in the discussion section and we combined 3,4,5 sections. The manuscript has been modified accordingly.

AD14. In the last paragraph the authors describe in detail the advantages of the clinical and the photography methodology. It would expected to describe the limitations of these method, too.

We agree with the comment that the limitations of these method should be included, too. The manuscript has been modified accordingly.

AD15. Finally, the language of the manuscript must be revised by a native English speaker.

We agree with the comment and the manuscript was revised.

Overall, it is an interesting study, but currently it cannot be published. I would recommend a major revision and resubmission.

We would like to thanks both the Reviewers for all questions, comments and suggestions concerning our work which were very helpful to improve it.
Yours sincerely,

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