Author’s response to reviews

Title: The Effect of Education on the Assessment of Optic Nerve Head Photographs for the Glaucoma Diagnosis

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Author's response to reviews: see over
Dear editors of BMC Ophthalmology,

We would like to thank the editors and reviewers for a prudent review with interesting and valuable comments. Our manuscript is revised and written responses to the reviewer comments are given below. Please, find our enclosed and changed manuscript entitled “The Effect of Education on the Assessment of Optic Nerve Head Photographs for the Glaucoma Diagnosis”.

We hope that you will find our revised manuscript of interest and we thank you again for considering our work for publication in BMC Ophthalmology.

Sincerely yours

Sabina Andersson

All changes in the document are highlighted in bright yellow and are marked by Microsoft tracking mode and therein added numbered comments as below:

Response to report by referee #1, Luis Pablo:

• Comment 1: The authors stated that sensitivity was highest in the group of glaucoma experts but the numbers in table 2 provides scarce differences between general ophthalmologists and glaucoma specialists, moreover the effect of the lesson on sensitivity was similar in the whole sample. It is possible that the number of evaluators in some groups is too small to draw conclusions on the matter.

We agree with the comment that the numbers of evaluators in the subgroups are too small for any statistical comparisons. This was reported in the “Analyses” section of the manuscript but we have now clarified this statement under “Analyses” and “Discussion” (page 7, subsection 2 and page 10, subsection 1). Conclusions and statistical calculations in the manuscript are only based on all the graders, but we do however report the results from the different subgroups since we judge this to be of interest even if no statistical comparisons are made.

• Comment 2: Also is surprisingly high the decreasing number of uncertain cases among glaucoma experts after the lesson, I think this subject should be commented in the discussion.

We also agree with the comment that it is somewhat surprisingly that even the glaucoma experts, as for the other graders, showed a marked decrease of the uncertain classifications after the training session. We believe that it is to expect that glaucoma experts are more experienced and that this would make this group of graders less affected by training as compared with less experienced graders. We have rewritten our manuscript according to this comment to better notify this result in the “Discussion” part of the manuscript (page 10, subsection 2).
Response to report by referee #2, Larry Kagemann:

- **Comment 3:** *Background: 1850ies should be 1850's.*

  This clerical error in the “Background” is changed to “1850's” (page 3, subsection 1).

- **Comment 4:** *Methods: How much time was allotted? Did people finish image assessment with time to spare or were they rushed? Was the same amount of time allotted for both pre and post lecture image grading sessions?*

  There were no time limit for either pre- or post lecture assessment, this information was unfortunately missing and is now added under “Methods” (page 4, subsection 4).

- **Comment 5:** *Methods: What was the model of the fundus camera? FF?*

  The fundus camera used was a Carl Zeiss model 60 306, this information is added in the “Methods – photographs” section (page 6, subsection 2).

- **Comment 6:** *Methods: Is there a reference to suggest the amount of diagnostic utility lost in the digitization process?*

  There are several studies in the diabetic retinopathy and macular degeneration area that have shown that there are close agreement between the digitized retinal images and photographs, without any or with very little loss in diagnostic utility. A recent study by Stone et al. whom compared slide photographs, primary digital and digitized images of the optic nerve head, showed that digitized images were a fitting alternative to the traditional slide photographs. We have changed our “Discussion” section, adding information and references regarding this comment (page 11, subsection 3).

- **Comment 7:** *Discussion: “The effect of re-training of ONH assessment was partly positive.” This suggests that it was partly negative as well. It might be more accurate to say that the effect was small but positive.*

  We agree that our phrase in the beginning of “Discussion” might leave some confusion of how to interpret our written sentence and has therefore changed it according to this comment (page 9, subsection 4).

- **Comment 8:** *Conclusion: The last several sentences are speculative and fail to summarize the findings. Put the speculations into the discussion and conclude with a summarization of the findings; training produces small positive changes in performance.*

  The “Conclusion” section is shortened and rewritten and some changes are made in the "Discussion" in accordance with this comment (page 10, subsection 3; page 12, subsection 1 and 2).