Author’s response to reviews

Title: Comparing Habitual and i.Scription Refractions

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Reviewer reports:

Ismail Shatriah (Reviewer 3): Please include all comments for the authors in this box rather than uploading your report as an attachment. Please only upload as attachments annotated versions of manuscripts, graphs, supporting materials or other aspects of your report which cannot be included in a text format.

Please overwrite this text when adding your comments to the authors.

Introduction

- A very long introduction. Focus to the main keywords.

Reply: Introduction section has been reduced in length with emphasis on the key aspects of this manuscript.

Subjects and Methods

- The authors did not mention about date of this study and the study design.
Reply: This study was performed from 2014-2015. It was a prospective study. This information is included in the manuscript.

- It is important to state degree of refractive errors allowed to be included in this study.

Reply: This is now included in the methods section.

- Need to explain clearly about the questionnaire.

Reply: We have included the questionnaire as an addendum.

- The sample size was VERY SMALL for this study design.

Reply: We had a small sample size and it has been listed as one of the limitations of the study. We have made recommendations for a future larger scale study. However, the results reported in this pilot study, based on parametric statistics are still valid based on this smaller sample size.

- Clear definition of manifest subjection and habitual refraction is necessary.

Reply: This definition is now provided in the Methods section.

- The authors were supposed to complete the ocular examination to ensure that their patients did not have organic ocular diseases before conducting refraction assessments.

Reply: Subjects were pre-screened via questionnaire and an ocular exam was performed that included examination of the anterior and posterior segment. In addition, none of the subjects in our study had decreased vision.

- Please mention ways to minimize errors in your study.

Reply: There are limitations in this study and it has been listed at the end of the manuscript.

Results
- Demographic and baseline clinical data (especially refractive status) are important.
- It is expected that the authors will present baseline clinical data in the subjects first, then followed with results illustrating the study objectives.

Reply: The objective of this study was to investigate the difference in the refractions generated by i.Scription computed from a manifest subjective refraction (results of a subjective refraction) and the habitual refraction (self-reported by the subjects). In the results section, we have summarized the results of each component of refraction from habitual, manifest and i.Scription and then in subsequent sections, we have identified the differences between them, followed by any potential correlations with subjective questionnaire. We feel that the follow of the results section meets the description as suggested by the reviewer. We would really appreciate if the reviewer can be more specific in his/her suggestion, following which we could make the necessary changes.

Discussion and Conclusion

- Need more comparison with other published studies.

Reply: Discussion section now includes comparison with few other studies. (Nicole, could you please add some refs and extend the discussion section.)

We thank the reviewer for providing valuable input that has helped their manuscript significantly.

Ilana B. Friedman (Reviewer 4): The authors are to be congratulated on their manuscript. While there were many issues that the previous reviewers pointed out, the authors did an excellent job of addressing them within the limitations of the study. The paper does suffer a little bit from highly technical language and statistical discussion which make it a little difficult for the reader to get through. In addition, the sample size was very small and it is unclear whether there is sufficient power to draw the conclusions that the authors make. This also makes subgroup analysis questionable.
Lastly, the question still remains whether it is possible and easily accessible for people to obtain glasses that would correlate with the iscription refractions. A comment regarding how the refractions translate to real world prescriptions would be helpful to the reader.

Reply: The technical language has been simplified where possible. Smaller sample size is a limitation in this study and hence this serves as a pilot study. We did not have sufficient subjects for sub-group analysis so we did very limited comparison that included a subgroup analysis of the myopes. Further studies using larger sample size could be done. In addition, a follow up with using the prescribed glasses can also be included. The device used in this study is called iprofiler and it is commercially available from select eye doctors in any given geographical area as listed in Zeiss.com. These glasses are made from i.scription using manifest refraction so they would correlate well.

It may not be significantly more beneficial than habitual correction for everyone, except for a select few individuals who happen to be the most symptomatic with fatigue and night vision complaints.

We thank the reviewer for providing valuable input that has helped their manuscript significantly.