

Peer Review File

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Comment 1: The explanation of the Dyop acuity chart is not well detailed. In the instructions, the authors only indicate the power of the sphere and astigmatism, and the axis of astigmatism were reduced to the smallest diameter for rotation detection. How is said smallest diameter selected? The minimum diameter provided by Dyop chart? Is the diameter equivalent to 0 logMAR? Please, as the novelty is the Dyop chart, describe more in detail the process.

Reply 1: The smallest diameter was determined by asking if the subject perceived any rotation of the target. The smallest diameter could be less than 0 LogMAR equivalent. It depended on the best correctable vision of the individual subject.

Changes in the text: we have added more information in our text (see Page 5, line 108-110).

Comment 2: In Line 163, the Dyop chart reports a higher standard deviation in terms of time versus the E-chart. Have you considered why?

Reply 2: Subjects who had better motion perception may respond faster with Dyop. Ageing is one of the factors associated with motion perception (Sepulveda JA, Anderson AJ, Wood JM, et al. Differential aging effects in motion perception tasks for central and peripheral vision. *Journal of vision* 2020;20:8.). Although all subjects had visual acuity better than 6/12, their motion perception could be different, which may cause the larger variations in time.

Changes in the text: we have added more information in our text (see Page 8, line 171).

Comment 3: In the abstract and in the methods section, the authors indicate that subject had visual acuity better than 6/12 in both eyes. Was that with their habitual compensation? Please, indicate.

Reply 3: Yes, subjects had habitual aided visual acuity better than 6/12.

Changes in the text: we have added 'aided' in the sentences describing subjects' visual acuities (see Page 2 line 33, Page 4 line 81, Page 10 line 205).

Comment 4: In Line 108, the authors write an equation for estimating the logMAR visual acuity using Dyop chart. Please, include a reference from which this equation comes from.

Reply 4: The equation was derived from a dataset provided by Dyop. The dataset contained Dyop in arc minutes and LogMAR acuity values.

Changes in the text: NIL

Comment 5: In Line 114, the authors indicate that one investigator performed the measurements. Is he/she an author? Who? Is he/she an optometrist/ophthalmologist? If so, how many years of experience as practitioner? Please, indicate it in the text.

Reply 5: The principal investigator is the author. She is a practising optometrist for over 10 years.

Changes in the text: we have added more information in our text (see Page 6, line 128-129).

Comment 6: In line 120, the meaning of β is not displayed. Please, indicate it.

Reply 6: β is the axis of the cylinder power obtained from the subjective refraction.

Changes in the text: we have added more information in our text (see Page 7, line 134)

Comment 7: In the statistic analysis, the authors used Mann-Whitney U test to compare between the two charts. Why using this test and not a t-test? Please, indicate.

Reply 7: The data was not distributed in normal distribution; therefore Mann-Whitney U test was used.

Changes in the text: NIL

Comment 8: In Line 137, the sentence must read 'As non-significant difference' to account for the comparison of only the data obtained from the right eye.

Reply 8: Yes, it should be non-significant difference.

Changes in the text: we have revised the information in our text (see Page 7, line 149)

Comment 9: In Line 143, please, add the diopters (D) unit to the results of the means. The same for Line 151 and 152.

Reply 9: Diopters were added.

Changes in the text: we have added the information in our text (see Page 7, line 153-155, Page 8 line 159-165)

Comment 10: In Line 146, there a missing dot between respectively and Bland, as the end of the sentence. Please, add.

Reply 10: The full stop was added.

Changes in the text: we have revised the information in our text (see Page 8, line 155)

Comment 11: Line 160, the subtitle must read 'Subjective refraction duration'. Correct it.

Reply 11: The word 'Subject' was changed to 'Subjective'.

Changes in the text: we have revised the information in our text (see Page 8, line 167)

Comment 12: In Line 163, could the authors indicate the range of time, to know the fastest and the slowest measurement time for both charts?

Reply 12: The range of the two measurements was added.

Changes in the text: we have revised the information in our text (see Page 8, line 169-170)

Comment 13: In the conclusions, the authors say that Dyop acuity chart is faster, but, in my opinion, is not much. In fact, the Dyop is 32 seconds significantly faster than the E-chart, which takes, in this study, an average of 452 seconds. Therefore, the Dyop is only 7%. I suggest the author to indicate, in Line 212, that the Dyop is slightly faster.

Reply 13: 'slightly' was added.

Changes in the text: we have revised the information in our text (see Page 10, line 212)

Comment 14: Figure 1 comes from other publications/webpages. Do the authors have the permissions to reproduce the figure?

Reply 14: Yes. Permission was obtained from the inventor of Dyop, Mr Allan Hytowitz. The permission proof was submitted.

Comment 15: I found that Figure 4 does not add much information, because is well explained in the text the flowchart followed. I would suggest the authors to remove this figure.

Reply 15: Figure 4 was removed.

Changes in the text: The numbering of the figure was rearranged in the whole text.

Comment 16: Axis in Figures 5, 6, and 7 are very different and makes the comparison hard. I suggest that Figures 5, 6, and 7 should have the same y-axis, and that Figures 6 and 7 should have the same X-axis.

Reply 16: the scales of the X and Y-axis were aligned.