Letter to the Editor

A letter to the editor regarding the mini review "*Assessing observer variability: a user's guide*"

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Submitted Dec 19, 2021. Accepted for publication Jan 30, 2022.

doi: 10.21037/cdt-21-779

View this article at: https://dx.doi.org/10.21037/cdt-21-779

You published an article titled "*Assessing observer variability: a user's guide*" by Popović & Thomas (1). In summary this article was organized into two parts. The first one where the authors discussed several statistical methods to assess observer variability and then elegantly stressed the importance of standard error of measurements and its impact in clinical practice. The second part consisted in a supplementary whose importance is not less than that of the paper main body. It gave a detailed and step by step examples to implement the calculation of standard error of measurements. However, under the subheading "*Comparing two SEMs*", the authors used the Eq. [1]:

$$t = \frac{\mathrm{SEM}^2\mathrm{methodA} - \mathrm{SEM}^2\mathrm{methodB}}{\sqrt{\mathrm{var}\left(\mathrm{SEM}^2\mathrm{methodA}\right) - \left(\mathrm{SEM}^2\mathrm{methodB}\right)}} \quad [1]$$

The subtraction product in the denominator can be negative and so its square root is impossible mathematically since it concerns the set of real numbers.

The authors also cited the paper of Mitchell *et al.* (2) but this latter used the Eq. [2] where the dominator is the square root of the sum of two positive numbers.

$$d = \frac{\mathrm{SEM}^2\mathrm{Manual} - \mathrm{SEM}^2\mathrm{Assisted}}{\sqrt{\mathrm{var}\left(\mathrm{SEM}^2\mathrm{Manual}\right) + \left(\mathrm{SEM}^2\mathrm{Assisted}\right)}} \quad [2]$$

Even after checking for the given examples, it is clear the wrong formulae was also implemented in the calculations.

Since the essence of this paper is to be a user's guide, this error should be corrected because it could lead readers to false conclusions.

Acknowledgments

Funding: None.

Footnote

Provenance and Peer Review: This article was a standard submission to the journal. The article has undergone external peer review.

Conflicts of Interest: The author has completed the ICMJE uniform disclosure form (available at https://cdt.amegroups.com/article/view/10.21037/cdt-21-779/coif). The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

References

1. Popović ZB, Thomas JD. Assessing observer variability: a user's guide. Cardiovasc Diagn Ther 2017;7:317-24.
2. Mitchell JR, Karlik SJ, Lee DH, et al. The variability of manual and computer assisted quantification of multiple sclerosis lesion volumes. Med Phys 1996;23:85-97.

Cite this article as: Bouchahda N. A letter to the editor regarding the mini review "*Assessing observer variability: a user's guide*". Cardiovasc Diagn Ther 2022;12(1):153-154. doi: 10.21037/cdt-21-779