Correction to: Feasibility of Smartphone-Based Gait Assessment for Parkinson's Disease

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Following the publication of the article by Tang et al. [1], inappropriate and missing citations were discovered. To make the article more comprehensive and complete, the authors propose to publish a correction. And the authors would like to apologize for any inconvenience caused to the readers by these changes in the paper. The corresponding corrections are shown below:

1. In the first paragraph of Sect. 2.1 General Gait Analysis, the references '[14,15]' were cited with errors. The corrected citation is '[13,14]'. Also, a reference (Godfrey et al., 2015) was missed and should be cited by the end of this paragraph.
2. Two missing references should be marked in the caption of Fig. 2. The corrected legend of Fig. 2 is given below.
Fig. 2 Structure of general gait analysis, where M refers to mean, A refers to asymmetry, and V refers to variability (Lord et al., 2013; Del Din et al., 2016).
3. When reporting Eqs. 2–5, reference (Godfrey et al., 2015) and reference [13] were not cited by mistake. Because of that the Paragraphs 4 to 7 in Sect. 2.1 (page 584) should be read:

The step velocity is derived using step length and step time (Godfrey et al., 2015 & Del Din et al., 2015 [13]), as follows:

$$\text{Step Velocity} = \frac{\text{Step Length}}{\text{Step Time}} \quad (2)$$

The degree of variability of the right and left foot data are derived from the variance of the right foot and left foot (Godfrey et al., 2015 & Del Din et al., 2015 [13]), as follows:

$$\text{Variability}_{\text{left \& right}} = \sqrt{\frac{\text{Variance}_{\text{left}} - \text{Variance}_{\text{right}}}{2}} \quad (3)$$

where $\text{Variability}_{\text{left \& right}}$ refers to the variation of the left foot and right foot, $\text{Variance}_{\text{left}}$ refers the variance of the left foot, and $\text{Variance}_{\text{right}}$ refers to the variance of right foot.

Variability in gait features is derived from the standard deviation (SD) in data pertaining to walking (Godfrey et al., 2015 & Del Din et al., 2015 [13]), for example,

$$\text{Variability} = \text{SD}(\text{Steps}) \quad (4)$$

Symmetry between the left foot and right foot is derived from the averages of the left foot and right foot (Godfrey et al., 2015 & Del Din et al., 2015 [13]), for example,

$$\text{Asymmetry}_{\text{left \& right}} = |\text{Average}_{\text{left}} - \text{Average}_{\text{right}}| \quad (5)$$

where $\text{Asymmetry}_{\text{left \& right}}$ refers to the absolute difference between the averages of the left foot $\text{Average}_{\text{left}}$ and the right foot $\text{Average}_{\text{right}}$.

The original article can be found online at <https://doi.org/10.1007/s40846-020-00551-6>.

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4. One missing reference should be marked in the caption of Fig. 3. The corrected legend of Fig. 3 is given below.

Fig. 3 Schematic illustration showing the derivation of gait analysis results (Godfrey et al., 2015)

Omitted references in the list:

Godfrey, A., Del Din, S., Barry, G., et al. Instrumenting gait with an accelerometer: A system and algorithm examination. *Medical Engineering & Physics*, 37, 400–407 (2015). <https://doi.org/10.1016/j.medengphy.2015.02.003>

Lord, S., Galna, B., Rochester, L. Moving forward on gait measurement: Toward a more refined approach. *Movement Disorders*, 28, 1534–1543 (2013). <https://doi.org/10.1002/mds.25545>

Del Din, S., Godfrey, A., Galna, B., et al. Free-living gait characteristics in ageing and Parkinson's disease: impact

of environment and ambulatory bout length. *Journal of NeuroEngineering and Rehabilitation*, 13, 46 (2016). <https://doi.org/10.1186/s12984-016-0154-5>

Reference

1. Tang, S., Tai, C., Yang, C., et al. (2020). Feasibility of Smartphone-Based Gait Assessment for Parkinson's Disease. *J. Med. Biol. Eng.*, 40, 582–591. <https://doi.org/10.1007/s40846-020-00551-6>.