

Cadence (steps/min) and relative intensity in 21 to 60-year-olds: the  
CADENCE-adults study (vol 18, 27, 2021)

Cayla R. McAvoy et al.

Deposited 2023-09-27

Citation of published version:

McAvoy, C. R., Moore, C. C., Aguiar, E. J., Ducharme, S. W., Schuna, J. M., Jr, Barreira, T. V., Chase, C. J., Gould, Z. R., Amalbert-Birriel, M. A., Chipkin, S. R., Staudenmayer, J., Tudor-Locke, C., & Mora-Gonzalez, J. (2022). Correction: Cadence (steps/min) and relative intensity in 21 to 60-year-olds: the CADENCE-adults study. In *International Journal of Behavioral Nutrition and Physical Activity* (Vol. 19, Issue 1). Springer Science and Business Media LLC.  
<https://doi.org/10.1186/s12966-022-01295-z>

©2022

This work is licensed under a Attribution 4.0 International (CC BY 4.0) license.



CORRECTION

Open Access



# Correction: Cadence (steps/min) and relative intensity in 21 to 60-year-olds: the CADENCE-adults study

Cayla R. McAvoy<sup>1</sup>, Christopher C. Moore<sup>2</sup>, Elroy J. Aguiar<sup>3</sup>, Scott W. Ducharme<sup>4</sup>, John M. Schuna Jr<sup>5</sup>, Tiago V. Barreira<sup>6</sup>, Colleen J. Chase<sup>7</sup>, Zachary R. Gould<sup>7</sup>, Marcos A. Amalbert-Birriel<sup>7</sup>, Stuart R. Chipkin<sup>7</sup>, John Staudenmayer<sup>8</sup>, Catrine Tudor-Locke<sup>1\*</sup> and Jose Mora-Gonzalez<sup>1</sup>

**Correction to: *Int J Behav Nutr Phys Act* 18, 27 (2021)**  
<https://doi.org/10.1186/s12966-021-01096-w>

Following the publication of the original article [1], the authors identified errors in the Results and Conclusions sections of the Abstract. The updated numbers are given below, and the changes have been highlighted in **bold typeface**.

The sentences currently reads:

Results:

Across all moderate intensity indicators, the segmented regression models estimated optimal cadence thresholds ranging from 123.8–127.5 (ages 21–30), 121.3–126.0 (ages 31–40), 117.7–122.7 (ages 41–50), and 113.3–116.1 steps/min (ages 51–60). Corresponding values for vigorous intensity were 140.3–144.1, 140.2–142.6, 139.3–143.6, and 131.6–132.8 steps/min, respectively. ROC analysis estimated chronologically-arranged age groups' cadence thresholds ranging from 114.5–118, 113.5–114.5, 104.6–112.9, and 103.6–106.0 across all moderate intensity indicators, and 127.5, 121.5, 117.2–123.2, and 113.0 steps/min, respectively, for vigorous intensity

Conclusions:

Heuristic cadence thresholds corresponding to relatively-defined moderate intensity for the chronologically-arranged age groups were  $\geq 120$ , 120, 115, and 105 steps/min, regardless of the intensity indicator (i.e., % HRmax, %HRR, or RPE).

The sentences should read:

Results:

Across all moderate intensity indicators, the segmented regression models estimated optimal cadence thresholds ranging from 123.8–127.5 (ages 21–30), **120.2**–126.0 (ages 31–40), 117.7–122.7 (ages 41–50), and 113.3–116.1 steps/min (ages 51–60). Corresponding values for vigorous intensity were 140.3–144.1, **139.6**–142.6, **138.7**–143.6, and 131.6–132.8 steps/min, respectively. ROC analysis estimated chronologically-arranged age groups' cadence thresholds ranging from 114.5–118, 113.5–114.5, 104.6–112.9, and 103.6–106.0 across all moderate intensity indicators, and **124.5**, 121.5, 117.2–**122.2**, and 113.0 steps/min, respectively, for vigorous intensity.

Conclusions:

Heuristic cadence thresholds corresponding to relatively-defined moderate intensity for the chronologically-arranged age groups were  $\geq 120$ , 120, 115, and **110** steps/min, regardless of the intensity indicator (i.e., % HRmax, %HRR, or RPE).

The original article [1] has been corrected.

The original article can be found online at <https://doi.org/10.1186/s12966-021-01096-w>.

\*Correspondence: [Tudor-Locke@uncc.edu](mailto:Tudor-Locke@uncc.edu)

<sup>1</sup> College of Health and Human Services, University of North Carolina at Charlotte, 9201 University City Blvd, Charlotte, NC 28223, USA  
Full list of author information is available at the end of the article



© The Author(s) 2022. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.

**Author details**

<sup>1</sup>College of Health and Human Services, University of North Carolina at Charlotte, 9201 University City Blvd, Charlotte, NC 28223, USA. <sup>2</sup>Department of Epidemiology, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA. <sup>3</sup>Department of Kinesiology, The University of Alabama, Tuscaloosa, AL, USA. <sup>4</sup>Department of Kinesiology, California State University, Long Beach, Long Beach, CA, USA. <sup>5</sup>School of Biological and Population Health Sciences, Oregon State University, Corvallis, OR, USA. <sup>6</sup>Exercise Science Department, Syracuse University, Syracuse, NY, USA. <sup>7</sup>Department of Kinesiology, University of Massachusetts Amherst, Amherst, MA, USA. <sup>8</sup>Department of Mathematics and Statistics, University of Massachusetts Amherst, Amherst, MA, USA.

Published online: 02 June 2022

**Reference**

1. McAvoy, et al. (2021) Cadence (steps/min) and relative intensity in 21 to 60-year-olds: the CADENCE-adults study. *Int J Behav Nutr Phys Act.* 2021;18:27. <https://doi.org/10.1186/s12966-021-01096-w>.

**Ready to submit your research? Choose BMC and benefit from:**

- fast, convenient online submission
- thorough peer review by experienced researchers in your field
- rapid publication on acceptance
- support for research data, including large and complex data types
- gold Open Access which fosters wider collaboration and increased citations
- maximum visibility for your research: over 100M website views per year

**At BMC, research is always in progress.**

Learn more [biomedcentral.com/submissions](https://biomedcentral.com/submissions)

