



OPEN ACCESS

EDITED BY

Ioannis Tarnanas,
Altoida, Inc., United States

REVIEWED BY

Lillian Hung,
University of British Columbia, Canada
Mario Bernardo-Filho,
Rio de Janeiro State University, Brazil
Eddy A. Van Der Zee,
University of Groningen, Netherlands
Redha Taiar,
Université de Reims
Champagne-Ardenne, France
Danúbia Da Cunha De Sá Caputo,
Rio de Janeiro State University, Brazil

*CORRESPONDENCE

Elsa A. Campbell
elsa.campbell@caritas-ettlingen.de

SPECIALTY SECTION

This article was submitted to
Psychology of Aging,
a section of the journal
Frontiers in Psychology

RECEIVED 26 July 2022

ACCEPTED 15 August 2022

PUBLISHED 16 September 2022

CITATION

Campbell EA, Kantor J, Kantorová L,
Svobodová Z and Wosch T (2022)
Corrigendum: Tactile low frequency
vibration in dementia management: A
scoping review.
Front. Psychol. 13:1003963.
doi: 10.3389/fpsyg.2022.1003963

COPYRIGHT

© 2022 Campbell, Kantor, Kantorová,
Svobodová and Wosch. This is an
open-access article distributed under
the terms of the [Creative Commons
Attribution License \(CC BY\)](https://creativecommons.org/licenses/by/4.0/). The use,
distribution or reproduction in other
forums is permitted, provided the
original author(s) and the copyright
owner(s) are credited and that the
original publication in this journal is
cited, in accordance with accepted
academic practice. No use, distribution
or reproduction is permitted which
does not comply with these terms.

Corrigendum: Tactile low frequency vibration in dementia management: A scoping review

Elsa A. Campbell^{1,2,3*}, Jirí Kantor³, Lucia Kantorová^{3,4},
Zuzana Svobodová^{3,5} and Thomas Wosch⁶

¹Caritas Association Ettlingen, Ettlingen, Germany, ²VIBRAC Skille-Lehikoinen Centre for Vibroacoustic Therapy and Research, Eino Roiha Foundation, Jyväskylä, Finland, ³Center of Evidence-Based Education and Arts Therapies: A JBI Affiliated Group, Institute of Special Education Sciences, Faculty of Education, Palacky University, Olomouc, Czechia, ⁴Faculty of Medicine, Czech National Centre for Evidence-Based Healthcare and Knowledge Translation (Cochrane Czech Republic, Czech EBHC: JBI Centre of Excellence, Masaryk University GRADE Centre), Institute of Biostatistics and Analyses, Masaryk University, Brno, Czechia, ⁵Faculty of Health Sciences, Palacky University, Olomouc, Czechia, ⁶Institute for Applied Social Sciences, University of Applied Social Sciences, Würzburg-Schweinfurt, Germany

KEYWORDS

low frequency vibration, dementia, vibroacoustic, whole body vibration, scoping review

A corrigendum on

Tactile low frequency vibration in dementia management: A scoping review

by Campbell, E. A., Kantor, J., Kantorová, L., Svobodová, Z., and Wosch, T. (2022). *Front. Psychol.* 13:854794. doi: 10.3389/fpsyg.2022.854794

In the published article, there was an error. The wording was misleading to the results of the cited article, [Clements-Cortes et al. \(2016\)](#). A correction has been made to Participant Responses to the Low Frequency Vibration Interventions section, paragraph two. The corrected paragraph is below.

The 40-Hz sound vibration stimulation improved cognition in mild, moderate, and severe AD participants in [Clements-Cortes et al. \(2016\)](#). The results indicate the increased SLUMS scores for 40 Hz diminish with disease severity, however this was statistically insignificant and results were nevertheless significant. Alternatively, in the mechanical vibration studies, the sample size was not large enough to conduct subgroup analyses to compare the impact of WBV on mild and moderate dementia ([Lam et al., 2018](#)). BPSD was not assessed by [Heesterbeek et al. \(2019a\)](#), however, even in these severe cases, attendance was still high and participants indicated the sessions were pleasant. EEG activation was significantly improved in mild dementia ([Kim and Lee, 2018](#)). These results may indicate that the intervention, although pleasant for those in the later stages of dementia, may be less effective for slowing cognitive decline. However, as mentioned by [Clements-Cortes et al. \(2016\)](#), accurately measuring small changes in cognition is problematic when only questionnaires are used and neuroimaging to supplement these outcomes is necessary. Still, the qualitative outcomes supported the

quantitative results in the sound vibration versus DVD (control group) comparison. The qualitative findings showed the control intervention had a sedative effect on participants as well as increasing agitation, boredom, and tiredness. In the sound vibration group, participants had increased awareness of their surroundings, were stimulated to engage in discussions or storytelling and had increased interaction, and were generally more alert. The authors reported that sound vibration appeared to have the largest effect on participants with mild to moderate Alzheimer's disease. Medication patterns and staff absences were also measured in one study (Mercado and Mercado, 2006); there was a 91% reduction in medication "as needed," and a 36% reduction in medication required immediately. During the three-month baseline period, there were 482 calls from staff members requesting unplanned absences which reduced to 270

at the conclusion of the intervention, indicating the general atmosphere was also more pleasant for staff.

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

- Clements-Cortes, A., Ahonen, H., Evans, M., Freedman, M., and Bartel, L. (2016). Short-term effects of rhythmic sensory stimulation in Alzheimer's disease: an exploratory pilot study. *J. Alzheimers Dis.* 52, 651–660. doi: 10.3233/JAD-160081
- Heesterbeek, M., Van Der Zee, E. A., and Van Heuvelen, M. J. G. (2019a). Feasibility of three novel forms of passive exercise in a multisensory environment in vulnerable institutionalized older adults with dementia. *J. Alzheimers Dis.* 70, 681–690. doi: 10.3233/JAD-190309
- Kim, K.-H., and Lee, H.-B. (2018). The effects of whole body vibration exercise intervention on electroencephalogram activation and cognitive function in women with senile dementia. *J. Exerc. Rehabil.* 14, 586–591. doi: 10.12965/jer.1836230.115
- Lam, F. M. H., Liao, L. R., Kwok, T. C. Y., and Pang, M. Y. C. (2018). Effects of adding whole-body vibration to routine day activity program on physical functioning in elderly with mild or moderate dementia: a randomized controlled trial. *Int. J. Geriatr. Psychiatry* 33, 21–30. doi: 10.1002/gps.4662
- Mercado, C., and Mercado, E. (2006). A program using environmental manipulation, music therapy activities, and the Somatron® Vibroacoustic chair to reduce agitation behaviors of nursing home residents with psychiatric disorders. *Mus. Ther. Perspect.* 24, 30–38. doi: 10.1093/mtp/24.1.30