



Corrigendum: Hearing Impairment Is Associated with Smaller Brain Volume in Aging

Stephanie C. Rigters^{1*}, Daniel Bos^{2,3}, Mick Metselaar¹, Gennady V. Roshchupkin², Robert J. Baatenburg de Jong¹, M. Arfan Ikram^{2,3,4}, Meike W. Vernooij^{2,3} and André Goedegebure¹

¹ Department of Otorhinolaryngology, Head and Neck Surgery, Erasmus University Medical Center, Rotterdam, Netherlands,

² Department of Radiology, Erasmus University Medical Center, Rotterdam, Netherlands, ³ Department of Epidemiology,

Erasmus University Medical Center, Rotterdam, Netherlands, ⁴ Department of Neurology, Erasmus University Medical Center, Rotterdam, Netherlands

OPEN ACCESS

Edited and reviewed by:

Aurel Popa-Wagner,
University of Rostock, Germany

*Correspondence:

Stephanie C. Rigters
s.rigters@erasmusmc.nl

Received: 04 April 2017

Accepted: 19 April 2017

Published: 08 May 2017

Citation:

Rigters SC, Bos D, Metselaar M, Roshchupkin GV, Baatenburg de Jong RJ, Ikram MA, Vernooij MW and Goedegebure A (2017) Corrigendum: Hearing Impairment Is Associated with Smaller Brain Volume in Aging. *Front. Aging Neurosci.* 9:131. doi: 10.3389/fnagi.2017.00131

Keywords: age-related hearing impairment, pure-tone audiogram, brain MRI, voxel-based analysis, white matter

A corrigendum on

Hearing Impairment Is Associated with Smaller Brain Volume in Aging

by Rigters, S. C., Bos, D., Metselaar, M., Roshchupkin, G. V., Baatenburg de Jong, R. J., Ikram M. A., et al. (2017). *Front. Aging Neurosci.* 9:2. doi: 10.3389/fnagi.2017.00002

In the original article, Roshchupkin et al. (2016) was not cited in the article. The citation has now been inserted in Materials and Methods, subsection Brain MRI Acquisition and Processing, second paragraph and should read:

Voxel based morphometry (VBM) was performed according to an optimized VBM protocol (Good et al., 2001) and was previously described (Roshchupkin et al., 2016). FSL software (Smith et al., 2004) was used for VBM data processing, all GM and WM density maps were non-linearly registered to the standard ICBM MNI152 GM and WM template (Montreal Neurological Institute) with a 1 mm × 1 mm × 1 mm voxel resolution. Subsequently, a spatial modulation and smoothing procedure with 3 mm (FWHM 8 mm) isotropic Gaussian kernel were applied to all images.

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

REFERENCES

- Good, C. D., Johnsrude, I. S., Ashburner, J., Henson, R. N., Friston, K. J., and Frackowiak, R. S. (2001). A voxel-based morphometric study of ageing in 465 normal adult human brains. *Neuroimage* 14, 21–36. doi: 10.1006/nimag.2001.0786
- Roshchupkin, G. V., Adams, H. H., van der Lee, S. J., Vernooij, M. W., van Duijn, C. M., Uitterlinden, A. G., et al. (2016). Fine mapping the effects of Alzheimer's disease risk loci on brain morphology. *Neurobiol. Aging* 48, 204–211. doi: 10.1016/j.neurobioaging.2016.08.024
- Smith, S. M., Jenkinson, M., Woolrich, M. W., Beckmann, C. F., Behrens, T. E. J., and Johansen-Berg, H. (2004). Advances in functional and structural MR image analysis and implementation as FSL.

Neuroimage 23(Suppl. 1), S208–S219. doi: 10.1016/j.neuroimage.2004.07.051

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2017 Rigters, Bos, Metselaar, Roshchupkin, Baatenburg de Jong, Ikram, Vernooij and Goedegebure. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) or licensor 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.