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Efficacy of a newly developed auditory – cognitive training system on speech recognition, central auditory processing and cognitive ability among older adults with normal cognition and with neurocognitive impairment (Article)

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Abstract

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Aim: To evaluate the efficacy of a newly developed auditory – cognitive training system on speech recognition, central auditory processing and cognition among older adults with normal cognition (NC) and with neurocognitive impairment (NCI). **Methods:** A double-blind quasi-experiment was carried out on NC (n = 43) and NCI (n = 33) groups. Participants in each group were randomly assigned into treatment and control programs groups. The treatment group underwent auditory – cognitive training, whereas the control group was assigned to watch documentary videos, three times per week, for 8 consecutive weeks. Study outcomes that included Montreal Cognitive Assessment, Malay Hearing in Noise Test, Dichotic Digit Test, Gaps in Noise Test and Pitch Pattern Sequence Test were measured at 4-week intervals at baseline, and weeks 4, 8 and 12. **Results:** Mixed design anova showed significant training effects in total Montreal Cognitive Assessment and Dichotic Digit Test in both groups, NC (P < 0.001) and NCI (P < 0.01). The NC group also showed significant training effects in the Malay Hearing in Noise Test (quiet) (P < 0.01), Gaps in Noise Test (P < 0.001) and Pitch Pattern Sequence Test (humming) (P < 0.05). All training effects were sustained up to 4 weeks after the training ended. **Conclusions:** The present study suggests that the newly developed auditory – cognitive training system has the potential to improve general cognition and some of the auditory processing abilities in both the NC and NCI groups. Because of the short test–retest intervals used in the present study, it is possible that the training effects were influenced by learning effect and, therefore, should be considered cautiously. *Geriatr Gerontol Int* 2019; 19: 768–773. © 2019 Japan Geriatrics Society

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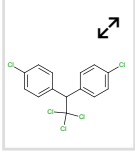
Mukari, S.Z.M.S., Yusof, Y., Ishak, W.S.
(2018) *Brazilian Journal of Otorhinolaryngology*

Introduction to Special Issue on Age, Hearing, and Speech Comprehension

Peelle, J.E.
(2016) *Experimental Aging Research*

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Shahar, S., Omar, A., Vanoh, D.
(2016) *Aging Clinical and Experimental Research*



Author keywords

auditory processing auditory – cognitive training cognition elderly speech recognition

Indexed keywords

EMTREE medical terms:

aged analysis of variance article clinical article comparative effectiveness
controlled study female human human experiment learning male
Montreal cognitive assessment outcome assessment pitch randomized controlled trial
speech discrimination speech -in-noise test videorecording auditory rehabilitation
cognition devices disorders of higher cerebral function double blind procedure
hearing procedures psychology software speech audiometry speech perception
treatment outcome

MeSH:

Aged Audiometry, Speech Auditory Perception Cognition
Correction of Hearing Impairment Double-Blind Method Female Humans Learning
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References (30)

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- 1 Mathers, C.D., Loncar, D.
Projections of global mortality and burden of disease from 2002 to 2030 (Open Access)

(2006) *PLoS Medicine*, 3 (11), pp. 2011-2030. Cited 5761 times.
http://medicine.plosjournals.org/archive/1549-1676/3/11/pdf/10.1371_journal.pmed.0030442-L.pdf
doi: 10.1371/journal.pmed.0030442

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