Accepted Manuscript

Title: Use of Near-infrared Spectroscopy in the investigation of brain activation during cognitive aging: A systematic review of an emerging area of research

Authors: Nounagnon F. Agbangla, Michel Audiffren, Cédric T. Albinet

PII: S1568-1637(17)30133-2
DOI: http://dx.doi.org/doi:10.1016/j.arr.2017.07.003
Reference: ARR 777

To appear in: *Ageing Research Reviews*

Received date: 12-6-2017
Revised date: 18-7-2017
Accepted date: 19-7-2017

Please cite this article as: Agbangla, Nounagnon F., Audiffren, Michel, Albinet, Cédric T., Use of Near-infrared Spectroscopy in the investigation of brain activation during cognitive aging: A systematic review of an emerging area of research.Ageing Research Reviews http://dx.doi.org/10.1016/j.arr.2017.07.003

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Use of Near-infrared Spectroscopy in the investigation of brain activation during cognitive aging: A systematic review of an emerging area of research.

Nounagnon F. Agbangla[1], Michel Audiffren[1] and Cédric T. Albinet[1, 2*]

[1]Centre de Recherches sur la Cognition et l'Apprentissage (UMR7295) Université de Poitiers and Université François-Rabelais de Tours - 5 rue Théodore Lefebvre TSA 21103 - 86073 Poitiers CEDEX 9 - France.

[2] Laboratoire Sciences de la Cognition, Technologie, Ergonomie (SCoTE), Université de Toulouse, INU Champollion, ALBI, France.

* Corresponding author:

Cédric T. Albinet, SCoTE, INU Champollion - Place Verdun, 81000 Albi - France.

E-mail: cedric.albinet@univ-jfc.fr
Telephone: +(33)5 63 48 64 30

Highlights

- > Near infrared spectroscopy (NIRS) is an emerging neuroimaging tool. > We reviewed 34 studies using NIRS in the field of cognitive aging. > We synthetized the major findings in light with interests and limits of this technique. > We proposed novel perspectives of research using functional NIRS.

Abstract

The cognitive neuroscience of aging is a growing and stimulating research area. The development of neuroimaging techniques in the past two decades has considerably increased our understanding of the brain mechanisms that might underlie cognitive performance and resulting changes due to normal aging. Beside traditional metabolic neuroimaging techniques, such as Positron Emission Tomography and functional Magnetic Resonance Imaging, near infrared spectroscopy (NIRS), an optical imaging technique allowing to monitor real-time cerebral blood oxygenation, has gained recent interest in this field. The aim of the present

Download English Version:

https://daneshyari.com/en/article/5500587

Download Persian Version:

https://daneshyari.com/article/5500587

Daneshyari.com