

Neurobiological underpinnings of cognitive emotion regulation in younger and older adults

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Primary Objective: Using fMRI to assess differences in brain activation during: (a) up- and down-regulation of emotional reaction to negative and positive pictures vs neutral pictures; and (b) working memory at low and high load with emotional...

Ethical review	Approved WMO
Status	Pending
Health condition type	Anxiety disorders and symptoms
Study type	Observational non invasive

Summary

ID

NL-OMON40649

Source

ToetsingOnline

Brief title

A fMRI study of cognitive emotion regulation

Condition

- Anxiety disorders and symptoms

Synonym

anxiety, stress

Research involving

Human

Sponsors and support

Primary sponsor: Universiteit Leiden

Source(s) of monetary or material Support: ERC ADvanced Grant

Intervention

Keyword: anxiety, elderly, emotion regulation, fMRI

Outcome measures

Primary outcome

Behavioural measures: Affective states on the emotion regulation task and reaction times on working memory task. Imaging: Blood-Oxygen-Level Dependent (BOLD) response during the task; BOLD response during rest (functional connectivity); Diffusion tensor imaging (DTI) (structural connectivity).

Secondary outcome

Exploratory analyses will be done on functional and structural connectivity using fMRI during rest and DTI respectively. Moreover, eye-tracking will be used to measure participants* fixation patterns while watching the visual stimuli.

Study description

Background summary

Dysfunctions in the neurobiological mechanism of emotion regulation may be characteristic of both younger and older adults with anxiety disorder, although no direct comparative studies are available. Major problems with the few existing comparative studies on emotion regulation in younger vs older healthy persons are that they used extreme group comparisons of students vs older adults, did not manipulate age-related differences in psychological processes such as executive functioning, and did not examine age-related differences in the up-regulation of positive emotions

Study objective

Primary Objective: Using fMRI to assess differences in brain activation during: (a) up- and down-regulation of emotional reaction to negative and positive pictures vs neutral pictures; and (b) working memory at low and high load with

emotional versus neutral distracters in younger and older adults with or without anxiety disorder. Behavioural performance between participants will be assessed to see whether (a) older participants and participants with anxiety disorder are less able to regulate their emotional reactions and (b) show stronger working memory impairment at high load and in reaction to emotional distracters compared with neutral distracters.

Secondary objective: Exploratory analyses will be done on functional and structural connectivity using fMRI during rest and diffusion tensor imaging (DTI) respectively.

Study design

A cross-sectional comparative design using four groups.

Study burden and risks

Participants will have to lie inside an MRI scanner, which may be of some discomfort because of the loud scanner noise and being asked to move as little as possible. In addition, emotional pictures are presented that may be disturbing, although these pictures have been used as stimuli in more than 100 studies, including both healthy participants and patient groups.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adults (18-64 years)

Elderly (65 years and older)

Inclusion criteria

(a) presence of anxiety disorder

(b) age between 18 and 75 years

Exclusion criteria

(a) depressive stoornis

(b) severe role impairments on various life domains

(c) other severe psychiatric disorders

Study design

Design

Study type: Observational non invasive

Intervention model: Other

Allocation: Non-randomized controlled trial

Masking: Open (masking not used)

Primary purpose: Basic science

Recruitment

NL

Recruitment status: Pending

Start date (anticipated): 01-08-2015

Enrollment: 120

Type: Anticipated

Ethics review

Approved WMO

Date: 19-09-2014

Application type: First submission

Review commission: METC Leiden-Den Haag-Delft (Leiden)

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Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL50523.058.14