Neural basis of cognitive-emotional processing in neuroticism

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON31149

Source
ToetsingOnline

Brief title
Neural basis of neuroticism

Condition

- Other condition

Synonym
it is a healthy subject study

Health condition

gezonde proefpersonen, maar met implicaties voor kwetsbaarheid voor psychische stoornissen

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: emotion, fMRI, neuroticism, personality

Outcome measures

Primary outcome

Previous studies did not differentiate between the different subfacets of

neuroticism.

Here, we would like to find out what the different effects are on the brain

reactivity during cognitive-emotional processes for quickley irritated on the

one hand and anxious people on the other hand.

Secondary outcome

n.v.t

Study description

Background summary

The personality trait neuroticism is a predictor for psychopathology (Ormel et al., 2004). The personality trait neuroticism has been correlated to specific brain regions. Subjects brain activation to viewing negative, relative to positive pictures correlated significantly with participants' neuroticism scores in left frontal and temporal cortical regions in a study by Canli et al. (2001). Other cognitive (Deckersbach et al., 2006; Eisenberger et al., 2005; Paulus et al., 2003) and emotional (Hariri et al., 2002) tasks have been used to identify brain areas correlated with the subjects* neuroticism scores of the NEO Five-Factor Inventory. In all the above studies, predictions could be made about the subject*s personality by the reactivity of the brain during the experiments.
However, there has previously been no research that tested the different

aspects of neuroticism and relate it to different neural circuits.

Study objective

The objective of this study is to test the hypothesis that the aspect of neuroticism "irritability" is associated with overactivation of specific brain areas during frustration while the aspect "anxious-depressed" is associated with overactivation during critique and judgment in a social context.

Study design

We will test different facets of neuroticism by using different tasks. There will be three tasks and five conditions in the fMRI experiment. The following psychological facets typical for personality trait neuroticism will be tested: anxiety and social judgement proneness, self-conscientiousness, emotional decision-making, and irritability, all reflecting different facets of neuroticism we are interested in. The three overt tasks include: facial expression task for anxiety proneness, the Ultimatum Game for emotional decision-making and the altered N-Back task for irritability. The five conditions reflect the different states we will try to put the subjects in. We will use subjects scoring high on the subscales *irritability* on the one hand, and those that score high on the subscale *anxiety* and *fear for negative self evaluation* on the other. These groups will perform 3 cognitive-emotional tasks as well as get minor external stressors during our fMRI experiment. The two groups of subjects will be compared with a control group.

Study burden and risks

Subjects will be exposed to a magnetic field of 3 Tesla and rapidly alternating magnet gradients and radio frequency fields. This field strength is used on a routinely basis in fMRI and MRI research. So far, no side effects have been described. On rare occasions, a peripheral nerve (abdomen) is stimulated by the changing magnet gradients. This will cause an itching feeling, but it is not harmful.

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

Healthy males and females

Exclusion criteria

1.MR incompatible implants in the body
2. Neurological complaints present as well as past
3. Use of drugs that may influence the task performance
4. Claustrofobia
5. Wishes not to be informed of brain abnormalities that may be noticed in the scans
6. (Suspected) Pregnancy

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	11-10-2007
Enrollment:	60
Type:	Actual

Medical products/devices used

Registration:	No

Ethics review

Approved WMO

Date:	09-08-2007
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

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	NL17456.042.07