Relationship of pain threshold and pain tolerance to cognitive functioning in healthy adults and older people.

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To study the relationship between pain threshold, pain tolerance and cognition in healthy adults and older people.

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

Summary

ID

NL-OMON32362

Source
ToetsingOnline

Brief title
Experimental pain and cognition in adults

Condition

- Other condition

Synonym
healthy aging

Health condition

Normale veroudering

Research involving
Human

Sponsors and support

Primary sponsor: Vrije Universiteit
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: cognition, elderly, pain threshold, pain tolerance

Outcome measures

Primary outcome

Pain threshold, pain tolerance, scores on the separate cognitive domains.

Secondary outcome

The amount of pain measured by the different pain scales, the score of the mood

questionnaire.

Study description

Background summary

Previous research shows a change in pain experience in demented elderly. The findings of these studies suggest that, compared to non-demented elderly, subgroups of patients with Alzheimer*s disease (AD) indicate to experience less quantitative (pain intensity) and less qualitative (pain affect) aspects of pain. Another study shows a relationship between pain experience and the severity of the dementia, i.e. the more severe the dementia (i.e. the lower the score on the Mini Mental State Examination [MMSE]), the higher the increase in pain tolerance (qualitative aspect of pain).
The relationship between pain experience and cognition is quite obvious. Some of the brain areas that are affected in AD are the hippocampus, the amygdala, the intralaminar nuclei of the thalamus, and the prefrontal cortex. Besides cognitive and behavioural involvement, these areas play also a role in the experience of pain, particular pain affect.
Not only in AD, but in healthy older people there is a decline in some cognitive functions as well, i.e. attention, information processing speed and working memory. The brain areas involved in these cognitive functions are involved in pain threshold (lateral pain system) and pain tolerance (medial pain system). Based on this information it is expected that a decline is specific cognitive domains, i.e. memory and executive functioning coincides

with an increase in pain tolerance.

Study objective

To study the relationship between pain threshold, pain tolerance and cognition in healthy adults and older people.

Study design

Observational

Study burden and risks

The applied pressure does not result in any permanent damage. In general the applied pressure does not result in any short-term damage, although a minimal risk of bruising cannot be ruled out.
Attention, concentration, and endurance are tested by the neuropsychological assessment. This can be fatiguing.

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

age 40 years or above
Mini Mental State Examination (MMSE) score of 24 or above

Exclusion criteria

dementia
history of psychiatric disorders
history of substance abuse
severe sight problems
history of cerebral trauma, cerebrovascular disease, normal pressure hydrocephalus, neoplasm, epilepsy, disturbances of conciousness, focal brain disorders

Study design

Design

Study type: Observational non invasive

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	01-06-2008
Enrollment:	45
Type:	Actual

Ethics review

Approved WMO Date:	23-05-2008
Application type:	First submission
Review commission:	METC Amsterdam UMC

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	NL22050.029.08