Investigating the genetic building blocks of emotion and behaviour in the general population

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This study aims to identify the relationship between candidate genes such as for instance BDNF, 5-HTTLPR, DAOA, G72, DTNBP1, NRG1 and COMT with cognitive function and emotional- and behavioural traits.

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

Summary

ID

NL-OMON35215

Source
ToetsingOnline

Brief title
Building blocks of emotion and behaviour

Condition

- Other condition

Synonym
Emotion and behaviour

Health condition

Emoties en gedrag

Research involving
Human

Sponsors and support

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

Intervention

Keyword: behaviour, emotions, general population, genes

Outcome measures

Primary outcome

the primary outcome of this study is detailed information about the

contribution of the candidate genes to emotion and behaviour.

Secondary outcome

The secondary outcome of this study is better understanding of the interplay

between genes, gene-expression and environmental influences with regard to

emotions and behaviour.

Study description

Background summary

In the past decade it has become apparent that genes play an important role in the aetiology of emotional and behavioural problems. To date linkage and association studies have identified several candidate genes that have a small to moderate effect on emotion and behaviour. There now is compelling evidence that genes such as; BDNF, 5-HTTLPR, DAOA, G72, DTNBP1, NRG1 and COMT influence emotions and behaviour. However, as with many complex traits the contribution of these genes to the trait is modest to small. This effect is aggravated by the complexity of emotions and behaviour. Some of these candidate genes have been identified in subjects with a broad variety of dysfunctions in the cognitive and social domains. Consequently it is unclear to what emotions or behaviour traits these genes are associated. Investigating the contribution of single genes to emotional and behavioural traits will greatly facilitate the unravelling of the genetic influence on emotion and behaviour.

Study objective

This study aims to identify the relationship between candidate genes such as for instance BDNF, 5-HTTLPR, DAOA, G72, DTNBP1, NRG1 and COMT with cognitive function and emotional- and behavioural traits.

Study design

A cross sectional study will be conduced where detailed behavioural data will be related to selected genotypes. Subjects will be selected based on genotype information from available samples. Next, selected subjects will be reassessed with regard to behavioural characteristics. From the 6000 samples we will include subjects homozygous for variants of genes that are associated with emotion or behaviour an equal amount of subjects homozygous for the other allele. Thus we would end up with a total number of fourteen groups, twice the number of candidate genes, adding up to a total of maximum 1050 subjects. After secondary informed consent we will asses psychological, cognitive and social functioning of these subjects. Raters and participants will remain blind for the genotype status in order to avoid rater bias and ethical complications. Blood samples will be taken to investigate RNA expression of the subjects.

Study burden and risks

The burden for the volunteers is modest. Most of the questionnaires can be done via the internet, in the desired tempo and place of the volunteers. The remaining questionnaires and assessments can be done in less than two hours. For this part of the research a rater will visit the subjects at home or the subjects can visit the local health centre. Obtaining a blood sample is a minor procedure which shall be preformed by an experienced medical doctor.

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

1)Participants from the Utrecht Health Project or particpants from the following studies:
-"The influence of cannabis use on symptoms of schizophrenia: investigating a gene-environment interaction in adolescents." (protocol number -06/100, UMC-Utrecht)
-*Genetic Determinants of Monoamine Metabolite Levels in Human Cerebrospinal Fluid (laatste versie, juli 2010).* (protocol number -08/127, UMC-Utrecht)
-*Kwetsbaarheid en veerkracht bij niet-affectieve psychose.* (protocol number -04/003, UMC-Utrecht)
2)Homozygous for one or more of the variant alleles (cases for the allele variant, controls for the opposite allele).
3) Age 18 or older
4) Informed consent
5) No major medical condition.
6) 4 Dutch grandparents

Exclusion criteria

None

Study design

Design

Study type: Observational invasive

Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	04-06-2008
Enrollment:	1050
Type:	Actual

Ethics review

Approved WMO Date:	12-06-2007
Application type:	First submission
Review commission:	METC NedMec
Approved WMO Date:	13-12-2010
Application type:	Amendment
Review commission:	METC NedMec

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	NL14577.041.06