Neurobiological factors in aggressive and antisocial juveniles. A prospective longitudinal research on the predictive value of neurobiological factors on the development and course of aggressive and antisocial behavior.

Published: 22-05-2008
Last updated: 07-05-2024

This follow-up study aims to investigate whether neurbiological factors (heart rate, cortisol, testosterone) can predict the persistence of antisocial behavior in boys who attended a delinquency diversion program four years earlier, at the age of 12…

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Psychiatric and behavioural symptoms NEC
Study type	Observational non invasive

Summary

ID

NL-OMON31849

Source
ToetsingOnline

Brief title
Neurobiological factors in aggressive and antisocial juveniles.

Condition

- Psychiatric and behavioural symptoms NEC

Synonym
Behavior problems, Disruptive behavior disorders

Research involving

Human

Sponsors and support

Primary sponsor: Vrije Universiteit Medisch Centrum
Source(s) of monetary or material Support: Hersenstichting;WODC

Intervention

Keyword: Adolescents, Delinquency, Disruptive behavior disorders, Neurobiology

Outcome measures

Primary outcome

The course of neurobiological parameters (heart rate, cortisol, testosterone),

disruptive behavior disorders, aggressive and delinquent behavior during a

follow-up period of four years during adolescence in delinquent boys.

Secondary outcome

Not applicable

Study description

Background summary

Antisocial behavior by children is a major public health problem. Individual functioning of these children is often poor and they are at risk for a series of negative outcomes in adulthood, in particular children who showed the first signs of antisocial behavior at young age. Risk factors which are important in explaining antisocial behavior can be divided in psychosocial and biological factors. It is important to acquire a better understanding of the development and persistence of antisocial behavior, to ultimately result in earlier and more effective interventions.

Study objective

This follow-up study aims to investigate whether neurbiological factors (heart rate, cortisol, testosterone) can predict the persistence of antisocial behavior in boys who attended a delinquency diversion program four years earlier, at the age of 12-14 years. The coherence between the development of

neurobiological factors and the course of behavior problems over four years of time will be examined in addition.

Study design

It concerns a prospective longitudinal study design.
In order to obtain data of crime and recidivism, the *Herkenningssysteem* (HKS, recognition system) of the police will be used, next to the *Justitie Documentatie Systeem* (JDS, judicial documentation system).
Sociodemographic, psychosocial and behavioral variables will be measured by means of a structured psychiatric interview (DISC) and self report questionnaires (both obtained from the boys and their parents).
Neurobiological parameters include salivary cortisol, testosterone and heart rate. Cortisol and heart rate will be measured during resting and stressful conditions. A standardized psychosocial stress test will be used; a Public Speaking Task with video recording.

Study burden and risks

The prevalence of disruptive behavior disorders, psychosocial problems and various types of aggression will be assessed by using a standardized psychiatric interview (NIMH-DISC IV) and various self report questionnaires, both administered from the participants as well as their parent(s).
The neurobiological factors that will be measured include salivary cortisol and testosterone, and heart rate. Cortisol and heart rate will be obtained during resting and stressful conditions. For this purpose, a standardized psychosocial stress test will be used, this is a Public Speaking Task with video recording.
It is guaranteed that any experienced stress will be stopped immediately after the test.
On a weekday, three saliva samples will be collected, immediately after awakening and after 30 and 60 minutes. The participant chews on a cotton swab for this purpose. This is a non-invasive method which can be done at home by the participant himself.
A few days or weeks after the last mentioned day the participant comes to the institute for the mentioned psychosocial test. Seven saliva samples will be obtained during this two-hour visit, again by chewing on a cotton swab.
The time burden will be kept as short as possible, the most preferable time will be chosen in consultation with the participant. In this case, the participant doesn*t have to skip any other important matters, like school, work or sports.
In view of the small burden and the lack of risks involved in participation, the performance of the research is justified.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adolescents (12-15 years)
Adolescents (16-17 years)
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

Gender: male
Age: 12-14
Target group: participation in diversion project (Halt)
Normal controls: no psychiatric problems, no participation in diversion project

Exclusion criteria

History or presence of neurological or endocrinogical disorders
Use of steroid medication

IQ below 70

Study design

Design

Study type: Observational non invasive

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

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	23-05-2008
Enrollment:	152
Type:	Actual

Ethics review

Approved WMO

Date:	22-05-2008
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	NL21928.029.08