Parenting and the brain

Published: 16-11-2016
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To gain insight in the neural basis of stereotypes in mothers (i.e., gender, prematurity).

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

Summary

ID

NL-OMON43136

Source
ToetsingOnline

Brief title
Parenting and the brain

Condition

- Other condition

Synonym
nvt

Health condition

geen aandoeningen

Research involving
Human

Sponsors and support

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

Intervention

Keyword: fMRI, mothers, stereotypes

Outcome measures

Primary outcome

We are interested in neural responses of mothers to stereotype incongruent information about children, and how such responses are related to the strength of mothers* implicit stereotypes on tasks outside the scanner.

Secondary outcome

Testing for differences in neural activity between mothers who have strong implicit stereotypical beliefs about children and mothers who have more egalitarian implicit stereotypes about children, and linking brain activity to mothers* current parenting practices and explicit stereotypes.

Study description

Background summary

Theoretically it is assumed that there is a close link between a person*s stereotypes and his or her behavior. Surprisingly, there is only a small body of literature demonstrating the link between mothers* stereotypes and the way they behave towards their own children. That only few studies have found a link between mothers* stereotypes and behavior, might have something to do with the difficulty of measuring parental stereotypes because self-reported (explicit) stereotypes are sensitive to response bias. Recently, it was discovered that implicit stereotypes can be robustly assessed with the use of brain imaging techniques, studying neural responses to violations to social expectations. Therefore, the aim of the current study is to examine the neural responses of mothers to pictures presenting stereotype congruent or incongruent information about children. Reactions to stereotype incongruence will be assessed on two dimensions; one concerning appropriate behavior of boys and girls, and one regarding the behavior of preterm babies and term babies. In this way, we can examine whether mothers* stereotypes about two different child-related subjects

have a different neural basis or not.

Study objective

To gain insight in the neural basis of stereotypes in mothers (i.e., gender, prematurity).

Study design

This study combines neural activity responses with behavioral assessments. Outside of the scanner, participants will perform two computerized tasks assessing implicit stereotypes about appropriate behavior of boys and girls, and behavior of preterm babies and term babies. In addition, we will measure brain activation using functional Magnetic Resonance Imaging (fMRI) while they are presented with pictures of children (i.e., boys, girls, preterm babies, term babies) paired with stereotype congruent and incongruent information about these children. All measurements are non-invasive.

Study burden and risks

There are no known risks associated with participating in the proposed measurements. MRI is a noninvasive technique involving no catheterizations or introduction of exogenous tracers. Numerous adults have undergone magnetic resonance studies without apparent harmful consequences. Some people become claustrophobic while inside the magnet and in these cases the study will be terminated immediately at the subject's request. The only absolute contraindications to MRI studies are the presence of intracranial or intraocular metal, or a pacemaker. Relative contraindications include pregnancy and claustrophobia. Subjects who may be pregnant, who may have metallic foreign bodies in the eyes or head, or who have cardiac pacemakers will be excluded because of potential contraindications of MRI in such subjects. Although there is no direct benefit to the participants from this proposed research, there are greater benefits to society from the potential knowledge gained from this study. Knowledge about the neural basis of mothers* stereotypes is important for explaining individual differences in mothers* behavior towards their children and can subsequently aid in the understanding of optimal or non-optimal child development. Also, this knowledge might be used in the future to design more effective interventions for reducing the effects of implicit (parental) stereotypes on (parenting) behavior.

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

- Right-handed
- Native Dutch speaker
- Mother with child aged between 2-6 years.

Exclusion criteria

- Left-handed
- Participants with a previously diagnosed intellectual disability (IQ < 70).
- Participants with a history of neurological or psychiatric disorder/disease or use of psychotropic medications.
- Contraindications for MRI, including metal implants, heart arrhythmia, and claustrophobia, epilepsy, closed head injury.
- Females who are pregnant.

To arrive at a sample of 30 mothers who meet the in- and exclusion criteria, approximately 100 mothers will have to be prescreened. Of the mothers meeting the prescreening requirements, the 10 highest-scoring mothers (on the computer tasks), the 10 lowest-scoring mothers, and 10 randomly selected mothers with intermediate scores will be invited for the

fMRI part.

Study design

Design

Study type: Observational invasive

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

Recruitment

NL

Recruitment status:	Completed
Start date (anticipated):	27-10-2017
Enrollment:	100
Type:	Actual

Ethics review

Approved WMO

Date:	16-11-2016
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

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	NL57779.041.16

Study results

Date completed: 31-10-2018

Results posted: 07-10-2019

Summary results
Trial ended prematurely

First publication
01-01-1900