Neural basis of cognitive-emotional processing and self-evaluation in schizophrenia

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The aim of this study is to investigate the neural correlates of different types of emotion regulation and emotional processing underlying social cognition.

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Schizophrenia and other psychotic disorders
Study type	Observational non invasive

Summary

ID

NL-OMON31915

Source
ToetsingOnline

Brief title
cognitive-emotional processing and self-evaluation in schizophrenia

Condition

- Schizophrenia and other psychotic disorders

Synonym
chronic psychotic illness, schizophrenia

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen
Source(s) of monetary or material Support: NWO

Intervention

Keyword: emotion regulation, emotional processing, self-evaluation

Outcome measures

Primary outcome

In this study brain activation during emotion regulation and self evaluation

will be investigated. Additionally questionnaire scores will be linked to the

brain activation.

Secondary outcome

Not applicable

Study description

Background summary

Schizophrenia is a grave mental illness that ranks very high among causes of long term disability. As this disease usually manifests itself between the ages of 16 and 30 years, it affects individuals at an often pivotal time in their personal, professional and social development. It is characterized by deficits in emotional processing and regulation (Aleman & Kahn, 2005).
Impairments in social functioning are a hallmark characteristic of schizophrenia (DSM-IV), and have been shown to be most pronounced in persons with schizophrenia, compared to other clinical disorders, such as bipolar disorder (Corrigan & Penn 2001). The study of social cognition in schizophrenia examines the processes responsible for social dysfunction (Corrigan & Penn, 2001; Pinkham et al. 2003). Social cognition has been defined as *the mental operations underlying social interactions, which include the human ability to perceive the intentions and dispositions of others* (Brothers 1990). These processes thus refer to information processing in the brain, underlying social interaction and they can be dissociated from nonsocial cognitive processes such as memory and general problem solving (Pinkham et al. 2003). The importance of social cognition is underscored by the fact that improvement in social functioning is a major outcome variable in the treatment of schizophrenia. That is, social cognition explains a larger portion of observed variance in every day social functioning, than nonsocial cognitive functions do (Pinkham et al. 2003).
Brain circuits underlying social cognition include the ventral striatum, the

amygdala, the medial prefrontal and orbitofrontal cortex, anterior cingulate, and insula (Phan et al. 2002; Pinkham et al. 2003). The importance of dopamine pathways in neural processing in these circuits is well established (Grace 2000). There is neuroanatomical evidence of abnormalities in brain circuits subserving social cognition in schizophrenia (Hulshoff Pol 2001; Gur et al. 2000; Chemerinski et al. 2002). These findings fit well with investigations of social cognition in schizophrenia, employing affect recognition tasks, social cue perception tasks, and theory-of-mind tasks, in which consistent impairments were found (Corrigan & Penn 2001).

Study objective

The aim of this study is to investigate the neural correlates of different types of emotion regulation and emotional processing underlying social cognition.

Study design

In this study patients and matched controls will undertake three fmri tasks, an anatomy and a resting state with use of (f)MRI, three questionnaires and an interview.
First the PANSS and possibly SCAN interview (for patients) will take place one week before the scanning session maximally. Just before the scanning session the participant has to fill in the PANAS, after this, instructions regarding the fmri procedure and tasks will be given. The tasks will start at the beginning of the experiment.
In the first task, the picture word task, the participant has to learn the associations between positive, negative and neutral IAPS pictures and words with the same valence. In the other task positive and negative words are presented on the screen. In the following task, the metrical stress and emotion task positive and negative words are presented on the screen. Participants have to decide if, in one condition, the metrical stress is on the first or second syllable, in the other condition participants have to judge if the word is positive or negative. In the third task, the participant will be asked to make decisions about themselves on specific statements requiring self-evaluation in the domains of mood, social interactions, cognitive and physical abilities. In the control condition, participants will be instructed to make decisions about statements of factual knowledge.
After the scanning session, the Bermond Vorst Alexithymia Questionnaire and the Birchwood Insight scale have to be completed.

Study burden and risks

Participants will be exposed to a 3 T magnetic field. No side effects have been described so far. On rare occasions, a peripheral nerve (abdomen) is stimulated by the changing magnet gradients. this will cause an itching feeling, but 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

schizophrenia for patients
healthy volunteers without psychiatric illness

Exclusion criteria

For healthy volunteers: participants with psychiatric or relevant neurologic disease, for which they have been treated will be excluded. Also contra-indications for fMRI will lead to

exclusion.
For patients: contra-indications for fMRI will lead to exclusion.

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Other

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	22-01-2008
Enrollment:	40
Type:	Actual

Ethics review

Approved WMO

Date:	31-10-2007
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	NL19749.042.07