Face processing in people with Autism Spectrum Disorders

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The primary objective of this study is to examine whether people with autism have an atypical sensitivity to specific visual information, and if this can explain differences between them and healthy controls in looking at faces.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Developmental disorders NEC
Study type	Observational non invasive

Summary

ID

NL-OMON38338

Source
ToetsingOnline

Brief title
Face processing in ASD

Condition

- Developmental disorders NEC

Synonym
Autism, Autism Spectrum Disorders

Research involving
Human

Sponsors and support

Primary sponsor: Universiteit Utrecht
Source(s) of monetary or material Support: NWO

Intervention

Keyword: Autism Spectrum Disorders, Detail discrimination, Eye tracking, Face processing

Outcome measures

Primary outcome

The main study parameters are (relative) duration of fixations on the eyes and (relative) number of fixations on the eyes. The hypothesis is that these measures will be different for the different levels of saliency, and that this difference will be dissimilar in the two subject groups.

Secondary outcome

Besides examining the eyes as region of interest (ROI) we will also examine looking at the mouth, since some studies report differences in it between the two groups. Likewise, we will check fixations on the face and the background to see whether the two groups spent the same amount of time/ fixations on the stimulus in general in the first flace. Self paced presentation time will also be recorded.

Above mentioned parameters are all about sustained attention, which is quite hard to interpret. That*s why we are also interested in the capture of attention. Therefore, we want to examine as well whether the start time of the first fixation on the eyes is different for the two levels of saliency manipulation and for the two groups.

Study description

Background summary

An important part of daily functioning exists of social interaction, which is something people with autism and related disorders (Autism Spectrum Disorders; ASD) have problems with. The diagnosis of autism or ASD is based on behavioral symptoms, but it has been proposed more and more that perceptual abnormalities underlie or contribute to these symptoms. An example of this abnormal perception is enhanced detail discrimination in people with ASD.
Especially a deficit in face processing would be important because this kind of processing is a crucial part of social interaction. Different views exist on abnormalities in this kind of processing in ASD, but this might be due to how people look at the stimulus material in the first place. This is why research on gaze behavior is very important, but also the results of this kind of research diverge. This might be explained by the differences in stimuli used. It is possible that people with ASD have an atypical sensitivity to specific visual information, since their focus on detail, and that this produces inconsistent results between studies using different stimuli. That is why in the current study it is examined whether (manipulated) saliency in the stimulus material will have a (different) influence on gaze behavior in people with ASD, when they look at faces.

Study objective

The primary objective of this study is to examine whether people with autism have an atypical sensitivity to specific visual information, and if this can explain differences between them and healthy controls in looking at faces.

Study design

In the proposed study, the patient group (diagnosed with ASD) will be compared to the control group on a number of measures of gaze behavior obtained using eye tracking. We propose a 2x2x2 design with group (patient, control) as between subject factor, and saliency (low, high), and emotion (neutral, fearful) as within subject factors.

Study burden and risks

The participants will be asked to visit the UMC Utrecht once. This session will take approximately 1 hour and 30 minutes, and will exist of IQ testing, additional tests/ questionnaires, and performing a computer task while eye movements are being tracked. Additional diagnostic testing will be required for some participants (up to an hour). Participants will receive 12,50 euro (or 20 when additional diagnostic testing is necessary) for compensation.
There are no foreseeable risks involved associated with IQ testing and the additional tests/ questionnaires, and eye tracking during the computer task.

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. Positive diagnosis of one of the autism-spectrum disorders other than PDD-NOS (pervasive developmental disorder, not otherwise specified) - i.e. Autism or Asperger syndrome, based on the DSM-IV and in addition standardized diagnostic instruments were administered: the Autism Diagnostic Interview (ADI-R, Lord, Rutter, & Le Couteur, 1994) and the Autism Diagnostic Observation Schedule (ADOS, Lord et al., 1989). - for patient group only.
2. IQ greater than 70 (in the average range or above).
3. Age and sex match to patient group - for the healthy-volunteer group only.
4. Normal (or corrected-to-normal) vision.
5. Good health.
6. Age over 18.

Exclusion criteria

1. Diagnosis of PDD-NOS assigned by both the DSM-IV and ADI/ ADOS (both is a prerequisite for exclusion).
2. History of closed head injury

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:	Basic science

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	03-05-2012
Enrollment:	50
Type:	Actual

Ethics review

Approved WMO Date:	12-07-2011
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)
Approved WMO Date:	06-08-2012
Application type:	Amendment
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	NL36405.041.11