ISRCTN97201297 https://doi.org/10.1186/ISRCTN97201297

Modifying emotion perception in adults with autism spectrum conditions

Submission date
16/06/2012

Recruitment status
No longer recruiting

Registration date
30/07/2012

Overall study status
Completed

Last Edited
04/02/2019

Condition category
Mental and Behavioural Disorders

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[X] Results
[ ] Individual participant data

Plain English summary of protocol

Background and study aims
Autism-spectrum conditions are characterised by a number of deficits in social cognition. This includes a relative difficulty identifying emotional expression in others. Our pilot work has indicated that it is possible to modify how individuals perceive emotional expression, such that when viewing computer-generated morph sequences running from one emotion to another, individuals see a change in the emotion somewhere in the middle. This balance point will be used to provide false feedback in the training phase, whereby participants will be trained to judge expressions previously judged as neutral as happy. In this way, sensitivity to a particular emotion can be increased. Pilot work in healthy volunteers shows that it is possible to sensitize (and desensitize) this population to individual emotions.
These early findings suggest that the emotion modification task could be beneficial for individuals with deficits in emotional processing. However, it remains unclear whether individuals with these deficits can engage with this type of task and show differences in processing after completing the task. We therefore propose to examine whether individuals with autism-spectrum conditions show similar changes in perception to individuals without an autism-related diagnosis.

Who can participate?
Participants will be 30 males and females aged 18 years or older with a diagnosis of an autism spectrum condition.

What does the study involve?
This is a computer-based intervention which presents faces on a neutral to happy morph sequence. Participants have to judge the emotion of the face presented. Feedback (informing participants whether they have made a correct or incorrect judgement) is used to train the participants after baseline measures of emotion perception have been taken. Participants will be randomly assigned to one of two groups: a treatment group, in which we attempt to change the perception of emotion, and a control group, in which feedback reflects their baseline performance (i.e. makes no attempt to change their perception of emotion).

What are the possible benefits and risks of participating?
A possible benefit would be an increased sensitivity to the perception of happy facial emotional expressions. There are no predicted risks of participating.

Where is the study run from?
The study is being run from The University of Bristol and the Bristol Autism Spectrum Service: Petherton Resource Centre (Bristol, UK).

When is the study starting and how long is it expected to run for?
June to September 2012

Who is funding the study?
University of Bristol (UK)

Who is the main contact?
Prof. Marcus Munafo
marcus.munafo@bristol.ac.uk

Contact information

Type(s)
Scientific

Contact name
Prof Marcus Munafo

ORCID ID
http://orcid.org/0000-0002-4049-993X

Contact details
School of Experimental Psychology
University of Bristol
12a Priory Road
Bristol
United Kingdom
BS8 1TU
+44 (0)11 7954 6841
marcus.munafo@bristol.ac.uk

Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
UoB1692

Study information

Scientific Title
Modifying emotion perception in adults with autism spectrum conditions: a double-blind placebo-controlled study

Study objectives
Autism-spectrum conditions are characterised by a number of deficits in social cognition. This includes a relative difficulty to identify emotional expression in others. Our pilot work has indicated that it is possible to modify how individuals perceive emotional expression, such that when viewing computer generated morph sequences running from one emotion to another, individuals see a change in the emotion somewhere in the middle. This balance point will be used to provide false feedback in the training phase, whereby participants will be trained to judge expressions previously judged as neutral as happy. In this way, sensitivity to a particular emotion can be increased. Pilot work in healthy volunteers shows that it is possible to sensitize (and desensitize) this population to individual emotions.

These early findings suggest that the emotion modification task could be beneficial for individuals with deficits in emotional processing. However, it remains unclear whether individuals with these deficits can engage with this type of task and showdifferences in processing after completing the task. We therefore propose to examine whether individuals with autism-spectrum conditions show similar changes in perception to individuals without an autism-related diagnosis.

Ethics approval required
Old ethics approval format

Ethics approval(s)
National Research Ethics Service Committee South West - Frenchay, 8/05/2012, REC ref: 12/SW /0113

Study design
Double-blind placebo-controlled study

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Other

Study type(s)
Treatment

Participant information sheet
Not available in web format, please use the contact details below to request a patient information sheet

Health condition(s) or problem(s) studied
Autism Spectrum Conditions

Interventions
Emotion recognition training versus control.

Participants will be randomly assigned to one of two groups
1. Treatment (in which we attempt to change the perception of emotion)
2. Control (in which feedback reflects their baseline performance i.e. makes no attempt to change their perception of emotion)

This is a computer-based intervention which presents faces on a neutral to happy morph sequence. Participants have to judge the emotion of the face presented.

Feedback (informing participants whether they have made a correct or incorrect judgement) is used to train the participants after baseline measures of emotion perception have been taken.

Intervention Type
Other

Phase
Not Applicable

Primary outcome measure
Change in balance point on neutral to happy morph sequence

Secondary outcome measures
1. Reading the mind in the eyes test (Revised): Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The " Reading the Mind in the Eyes" Test Revised Version: A Study with Normal Adults, and Adults with Asperger Syndrome or High-functioning Autism. Journal of Child Psychology and Psychiatry, 42(2), 241-251
2. Beck Depression Inventory ii (BDI-ii) score- Beck, A.T., Steer, R.A., & Brown, G.K. (1996), Manual for Beck Depression Inventory II (BDI-II). San Antonio, TX, Psychology Corporation.
3. Ritvo Autism Asperger Diagnostic Scale-Revised (RAADS-R). Ritvo et al. (2011). The Ritvo Autism Asperger Diagnostic Scale-Revised (RAADS-R): a scale to assist the diagnosis of Autism Spectrum Disorder in adults: an international validation study. Journal of Autism and Developmental Disorders, 41(8), 1076-1089.

Overall study start date
18/06/2012

Completion date
07/09/2012

Eligibility

Key inclusion criteria

1. Participants will be Service Users of the Bristol Autism Spectrum Service who have been diagnosed as having an Autism Spectrum Condition
2. Participants will be aged 18 years or over
3. Participants will have English as a first language or an equivalent level of fluency

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
30 participants will be recruited (15 experimental, 15 control)

Key exclusion criteria
1. Learning or intellectual disability
2. Severe enduring mental illness
3. History of severe head injury or trauma
4. Current use of antipsychotic medication
5. Uncorrected visual impairment
6. Participants deemed by the investigator or clinical team (Bristol Autism Spectrum Service) to be unable to complete the task
7. Participants deemed by the investigator or clinical team to be unable to give informed consent

Date of first enrolment
18/06/2012

Date of final enrolment
07/09/2012

Locations

Countries of recruitment
England

United Kingdom

Study participating centre
School of Experimental Psychology
Bristol
United Kingdom
BS8 1TU

Sponsor information

Organisation
University of Bristol (UK)

Sponsor details
Research Governance Officer
c/o Anna Brooke
Research and Enterprise Development
Senate House
Tyndall Avenue
Bristol
England
United Kingdom
BS8 1TH
+44 (0)11 7331 7709
anna.brooke@bristol.ac.uk

Sponsor type
University/education

ROR
https://ror.org/0524sp257

Funder(s)

Funder type
University/education

Funder Name
University of Bristol (UK)

Alternative Name(s)
Universitas Bristolliensis, bristoluniversity, bristoluni

Funding Body Type
Government organisation

Funding Body Subtype
Universities (academic only)

Location
United Kingdom

Results and Publications

Publication and dissemination plan
Data will be archived on the data.bris repository

Intention to publish date

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Stored in repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Preprint results	results	01/02/2019		No	No