Clinical Trial Protocol
Iranian Registry of Clinical Trials

24 Jun 2026

The effectiveness of transcranial direct current stimulation on executive functions, the severity of obsessive-compulsive symptoms, and rumination in people with obsessive-compulsive symptoms

Protocol summary

Study aim
The effectiveness of transcranial direct current stimulation on executive functions, the severity of obsessive-compulsive symptoms, and rumination in people with obsessive-compulsive symptoms

Design
This clinical trial has two groups: control and intervention. This is a randomized, double-blind, phase 2-3 study with 38 patients. Randomization will be done using random numbers created by the computer. The patient and the data analyzer are blind.

Settings and conduct
Qualified patients will be randomly divided into intervention and control groups each one with 20 patients. Accidental randomization will be performed based on the randomization table. This clinical trial has a community-based, action-oriented control group with parallel and double-blind groups. The patient and the data analyzer are blind. This study will be done in Golestan hospital, Ahvaz

Participants/Inclusion and exclusion criteria
Included criteria: obtaining a cut-off score on Madzley's obsessive-compulsive disorder questionnaire; failure to receive psychological treatment at the same time; age between 18 and 60 years old. Exclusion criteria: severe physical illnesses such as cancer or epilepsy; concomitant participation in any type of psychotherapy; severe organic brain disorder.

Intervention groups
In the intervention group, stimulation with the right anode and left cathode is performed by a specialist technician without the knowledge of the subject and the experimenter. The intervention will be performed randomly with an intensity of 2 mA on the posterior-lateral forehead area. The protocol is 8 sessions of 30 minutes every 3 days measurements will be done one hour after the end of the session. Control group: the right anode and left cathode will place on the forehead by an experienced technician with no knowledge of the subject but the machine will not turn on.

Main outcome variables
Algebraic obsessive-compulsive disorder

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20220220054069N1**
Registration date: **2022-03-07, 1400/12/16**
Registration timing: **prospective**

Last update: **2022-03-07, 1400/12/16**
Update count: **0**

Registration date
2022-03-07, 1400/12/16

Registrant information

Name
Shahin Norouzi

Name of organization / entity

Country
Iran (Islamic Republic of)

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+98 61 3620 1853

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norouzi-s@ajums.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2022-04-21, 1401/02/01

Expected recruitment end date
2022-06-24, 1401/04/03

Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effectiveness of transcranial direct current stimulation on executive functions, the severity of obsessive-compulsive symptoms, and rumination in people with obsessive-compulsive symptoms

Public title
The effectiveness of transcranial direct current stimulation on people with obsessive-compulsive symptoms
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Obtaining a cut-off score on Madzley's obsessive-compulsive disorder questionnaire Failure to receive psychological treatment at the same time Age between 18 and 60 years old Having at least an eighth years education
Exclusion criteria:
Severe physical illnesses such as cancer or epilepsy Severe organic brain disorder Simultaneous participation in any type of psychotherapy Having bipolar and psychotic symptoms
Age
From **18 years** old to **60 years** old
Gender
Both

Phase
2-3
Groups that have been masked

- Participant
- Data analyser

Sample size
Target sample size: **38**
Randomization (investigator's opinion)
Randomized
Randomization description
Randomization will be done using random numbers created by the computer. Random sequence generation software is used to generate numbers. Each random sequence is recorded on a card and the cards are sealed inside the envelope. At the beginning of the registration of participants, based on the order of entry of eligible participants into the study, one of the envelopes of the letter is opened in order and the assigned group of the participant is revealed..
Blinding (investigator's opinion)
Double blinded
Blinding description
The double-blind side includes the patient and the person who is responsible for analyzing the data. The patient knows that he has participated in a study but does not know what treatment is receiving. The person who is responsible for analyzing the data does not know which patient was involved in the intervention group.
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Ahvaz Jundishapur University of Medical Sciences
Street address
Golestan Blvd, Ahvaz, Khoozestan
City
Ahvaz
Province
Khouzestan
Postal code
6135715794
Approval date
2021-12-28, 1400/10/07
Ethics committee reference number
IR.AJUMS.HGOLESTAN.REC.1400.152

Health conditions studied

1

Description of health condition studied
Obsessive-compulsive disorders
ICD-10 code
F42
ICD-10 code description
Obsessive-compulsive disorder

Primary outcomes

1

Description
Algebraic obsessive-compulsive disorder
Timepoint
Before and after the intervention
Method of measurement
Madzley Obsessive-Compulsive Disorder Questionnaire

2

Description
The severity of obsessive-compulsive symptoms
Timepoint
Before and after the intervention
Method of measurement

Yale Brown Questionnaire

3

Description
Executive functions
Timepoint
Before and after the intervention
Method of measurement
Questionnaire

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: in the intervention group, stimulation with the right anode and left cathode is performed by a specialist technician without the knowledge of the subject and the experimenter. The intervention will be performed randomly with an intensity of 2 mA on the posterior-lateral forehead area. The protocol is 8 sessions of 30 minutes with three-day intervals and the measurements will be done one hour after the end of the session.
Category
Treatment - Other

2

Description
Control group: The right anode and left cathode will place on the forehead by an experienced technician with no knowledge of the subject but the machine will not turn on.
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Psychiatry Clinic, Golestan Hospital
Full name of responsible person
Shahin Norouzi
Street address
Ahvaz Golestan Hospital, Golestan Blvd,Ahvaz
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Ahvaz University of Medical Sciences
Full name of responsible person
Mehrnoosh Zaker Kish
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Ahvaz Junishapur University of Medical Sciences, Farvardin Blvd.
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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Ahvaz University of Medical Sciences
Proportion provided by this source
100
Public or private sector
Private
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
Ahvaz University of Medical Sciences
Full name of responsible person
Mohammad Jahanseir chooshali
Position
Resident
Latest degree
Specialist
Other areas of specialty/work
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available
Study Protocol
No - There is not a plan to make this available
Statistical Analysis Plan
No - There is not a plan to make this available
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
No - There is not a plan to make this available
Analytic Code
No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available