Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Investigating the Effectiveness of adding Transcranial Direct Current Stimulation (tDCS) to the Camperdown program on the Stuttering Severity index in Adults with Stuttering: A Randomized Double-Blind Clinical Trial

Protocol summary

Study aim
Objectives: The aim of this study is to investigate the effectiveness of tDCS stimulation along with conventional speech therapy in reducing the severity of stuttering in adults.

Design
The study is designed as a randomized clinical trial.

Settings and conduct
60 adults with stuttering from Golestan Hospital in Ahvaz will be randomly divided into two intervention and control groups. Both groups will be given conventional speech therapy, but the intervention group will also be given electrical stimulation with tDCS.In the control group, tDCS is provided in a sham and silent form. The duration of the intervention period is 8 sessions and a one-month follow-up period is considered for treatment follow-up.

Participants/Inclusion and exclusion criteria
Study inclusion and exclusion criteria: Adults with stuttering, age range 18 to 50 years, no metallic objects or abnormalities in the skull, Unwillingness to continue participating in the research.

Intervention groups
Intervention group: 30 adults with stuttering receiving speech therapy plus tDCS electrical stimulation Control group: 30 adults with stuttering receiving speech therapy without tDCS electrical stimulation (sham tDCS)

Main outcome variables
Main outcomes: stuttering severity and stuttering-related quality of life.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20110928007657N5**
Registration date: **2026-03-17, 1404/12/26**
Registration timing: **prospective**

Last update: **2026-03-17, 1404/12/26**
Update count: **0**

Registration date
2026-03-17, 1404/12/26

Registrant information
Name
Peyman Zamani
Name of organization / entity
Ahvaz Jundishapur University of Medical Sciences
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Iran (Islamic Republic of)
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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2026-03-21, 1405/01/01

Expected recruitment end date
2026-09-21, 1405/06/30

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Investigating the Effectiveness of adding Transcranial

Direct Current Stimulation (tDCS) to the Camperdown program on the Stuttering Severity index in Adults with Stuttering: A Randomized Double-Blind Clinical Trial

Public title
Effectiveness of adding Transcranial Direct Current Stimulation (tDCS) to the Camperdown program on the Stuttering Severity index in Adults
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Having developmental stuttering Having moderate to severe stuttering being Right-handed being Farsi-language Not receiving stuttering-related treatment in the past month prior to the start of the intervention
Exclusion criteria:
Having skin lesions or bone defects in the skull area Presence of other speech disorders with stuttering Taking brain-stimulating drugs Having metal implants in the skull
Age
From **18 years** old to **50 years** old
Gender
Both

Phase
N/A
Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

Sample size
Target sample size: **40**
Randomization (investigator's opinion)
Randomized
Randomization description
Simple Randomized-block design Randomization will be performed by using Randomized-block design method through WINPEPI software as well as applying 4-block for each group. This software create a sequence of random numbers that is used to assign participants to one of the groups. The person who is responsible to make a random list will be blinded to participants.
Blinding (investigator's opinion)
Double blinded
Blinding description
Blinding of participants is done using a sham method. Assessor blinding: The assessor is unfamiliar with the name, gender, and grouping of the study subjects. Blinding of the data analyst: The assessor is unfamiliar with the name, gender, and grouping of the study subjects.
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 Ave., Golestan Hospital., School of Rehabilitation, Speech Therapy Department.
City
Ahvaz
Province
Khouzestan
Postal code
6135733133
Approval date
2025-12-06, 1404/09/15
Ethics committee reference number
IR.AJUMS.REC.1404.491

Health conditions studied

1

Description of health condition studied
Stuttering
ICD-10 code
ICD-10 code description
لکنت

Primary outcomes

1

Description
Stuttering Severity
Timepoint
Before of intervention, After intervention, one month for follow up
Method of measurement
Questionnary of Stuttering Severity Scale

2

Description
Quality of Life
Timepoint
Before of intervention, After intervention, one month for follow up
Method of measurement
Overall Assessment of the Speakers Experiences of Stuttering

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group:Electrical stimulation is provided using the Segal Stim AT-12 device from Pharmed Tajhiz Company, in tDCS mode. An electroencephalography cap will be used to identify the location of the stimulation, so the brain areas are designated on it with the international 10-20 system. Stimulation is performed by passing a current of 2 mA and a resolution of 0.1 mA between two 5 cm x 7 cm electrodes for 20 minutes.Simultaneously with the device's stimulation, a speech therapy program is presented at a slow and drawn-out pace.

Category
Treatment - Devices

2

Description
Control group: In the control group, the device's electrical current will increase to 2 mA for 15 seconds and then immediately turn off. Simultaneously with the device's stimulation, a speech therapy program is presented at a slow and drawn-out pace.

Category
Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center
Golestan Hospital, Ahvaz Jundishapur University of Medical Sciences

Full name of responsible person
Peyman Zamani

Street address
Golestan Ave., Golestan Hos., Ahvaz Jundishapur University of Medical Siences, School of Rehabilitation, Speech Therapy Department.

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Ahvaz University of Medical Sciences

Full name of responsible person
Dr. Abdollah Rafiei

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Golestan Blvd., Ahvaz Jundishapur University of Medical Sciences, School of rehabilitation.

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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
Public

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
Peyman Zamani

Position
Associate professor

Latest degree
Ph.D.

Other areas of specialty/work
Speech therapy

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Person responsible for scientific

inquiries

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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)
Yes - There is a plan to make this available

Study Protocol
Yes - There is a plan to make this available

Statistical Analysis Plan
Yes - There is a plan to make this available

Informed Consent Form
Yes - There is a plan to make this available

Clinical Study Report
Yes - There is a plan to make this available

Analytic Code
Not applicable

Data Dictionary
Not applicable

Title and more details about the data/document
Publishing an article, participating in a speech therapy scientific conference

When the data will become available and for how long
Access period starts 12 months after results are published.

To whom data/document is available
The data will be available to researchers working in academic and scientific institutions.

Under which criteria data/document could be used
-

From where data/document is obtainable
Peyman Zamani 09166176780

What processes are involved for a request to access data/document
Email and phone

Comments