Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Clinical trials of The effectiveness of transcranial direct current stimulation (tDCS) on food craving and implicit memory bias associated with food in people with food craving

Protocol summary

Summary

The aim of this study is to evaluate the effectiveness of transcranial direct current stimulation on food craving and implicit memory associated with food. Study population are all male students of Semnan University who have food craving. The number of participants is considered 20. Random numbers table was used to assign each member to the control and experimental groups. In this study, a randomized single-blind, placebo-controlled (Sham electrical stimulation) design was used. Inclusion criteria: Age range between 18 and 70 years; obtaining the food craving score at least one standard deviation higher than population mean; the body mass index (BMI) less than 40. Exclusion criteria: a history of eating disorders or depression, suicide attempts; having metal implants in the head; drug induced weight loss; having recently participation in the weight-loss programs; having an individual or family history of epilepsy; using any drugs intended to reduce seizure thresholds; a history of head surgery and loss of consciousness for more than 15 minutes; and having a history of endocrine disorders. Direct transcranial stimulation using 5 × 7 cm anodic and cathodic electrodes with 2 MA electrical velocity was applied in one 20-minute Session. The anode electrode is placed on the right side of the head in the dorsolateral prefrontal cortex (DLPFC), F4 region in the 10-20 system and cathode electrode is placed on the left side of the head, dorsal lateral prefrontal cortex (DLPFC), F3 region in the 10-20 system. The electrodes are soaked in a solution of sterile 0.9% sodium chloride. Outcomes: craving and memory.

General information

Acronym

-

IRCT registration information

IRCT registration number: **IRCT2016120331217N1**
Registration date: **2017-02-08, 1395/11/20**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2017-02-08, 1395/11/20

Registrant information

Name

Ebrahim Zeylabi Sandegani

Name of organization / entity

Semnan University

Country

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Recruitment status

Recruitment complete

Funding source

School of Psychology, University of Semnan

Expected recruitment start date

2016-06-21, 1395/04/01

Expected recruitment end date

2016-10-22, 1395/08/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Clinical trials of The effectiveness of transcranial direct current stimulation (tDCS) on food craving and implicit memory bias associated with food in people with food craving

Public title
The effectiveness of transcranial direct current stimulation (tDCS) on food craving and implicit memory bias associated with food
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria: Age range between 18 and 70 years; obtaining the food craving score at least one standard deviation higher than population mean; the body mass index (BMI) less than 40. Exclusion criteria: a history of eating disorders or depression, suicide attempts; having metal implants in the head; drug induced weight loss; having recently participation in the weight-loss programs; having an individual or family history of epilepsy; using any drugs intended to reduce seizure thresholds; a history of head surgery and loss of consciousness for more than 15 minutes; and having a history of endocrine disorders.
Age
From **18 years** old to **70 years** old
Gender
Male

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **20**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Single blinded
Blinding description
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

1

Registry name
-
Secondary trial Id
-
Registration date
empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Psychology Department, Semnan University
Street address
Psychology Department, Semnan University, Darband street, Mahdishahr, Semnan
City
Semnan
Postal code
356411156
Approval date
2016-05-17, 1395/02/28
Ethics committee reference number
IR.SEMUMS.REC.1395.203

Health conditions studied

1

Description of health condition studied
Food craving and implicit memory associated with food
ICD-10 code
-
ICD-10 code description
-

Primary outcomes

1

Description
Food Craving
Timepoint
Before intervention, during the intervention i.e. 10 minutes after stimulation, at the end of intervention i.e. after 20 minutes stimulation.
Method of measurement
the visual analog scale (VAS)

Secondary outcomes

1

Description
Implicit Memory
Timepoint
Before and twenty minutes after the intervention.
Method of measurement
Parallel self-report implicit memory questionnaires.

Intervention groups

1

Description
Intervention group: The intervention was consisted of 40 mA electrical stimulation (2 mA per minute for 20 minutes). This amount of stimulation was delivered to the patients in a twenty-minute session. In this

intervention the left and right dorsolateral prefrontal cortex of participants were stimulated.

Category

Treatment - Devices

2

Description

Control group: The left and right dorsolateral and prefrontal cortexes were stimulated through Sham stimulation in the control group. The Sham stimulation has placebo-like effects. This stimulation was performed on the participants' heads for 20 minutes

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

Semnan University Counseling Center

Full name of responsible person

Dr Parviz Sabahi

Street address

Semnan University Counseling Center, Daneshkade Fanni street, Standard Square

City

Semnan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Semnan University

Full name of responsible person

Dr Parviz Sabahi

Street address

Deputy of Research and Technology, Semnan University, Saadi squre

City

Semnan

Grant name

-

Grant code / Reference number

-

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Vice chancellor for research, Semnan University

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

Semnan University

Full name of responsible person

Ebrahim Zeylabi Sandegani

Position

MA clinical Psychology

Other areas of specialty/work

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Ebrahim zeylabi Sandegani

Position

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Other areas of specialty/work

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty
Study Protocol
empty
Statistical Analysis Plan
empty
Informed Consent Form
empty
Clinical Study Report
empty
Analytic Code
empty
Data Dictionary
empty