Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 2026

The effects of transcranial direct current stimulation (tDCS) on attention, working memory , response inhibition and reaction time in patients with Parkinson's disease

Protocol summary

Study aim

Effect of anodal transcranial direct current stimulation (tDCS) on attention in people with Parkinson Effect of anodal transcranial direct current stimulation (tDCS) on working memory in people with Parkinson Effect of anodal transcranial direct current stimulation (tDCS) on Response inhibition in people with Parkinson Effect of anodal transcranial direct current stimulation (tDCS) on reaction time in people with Parkinson

Design

Randomised control trial with 30 participant that they are blind. randomisation is computerised with SAS software.

Settings and conduct

Place: Isfahan University of Medical Sciences' clinics. participant will randomly divided into 2 groups of intervention and control. Cognitive Rehabilitation program in addition to tDCS for intervention group and Cognitive Rehabilitation program without tDCS for control group. the researcher will be blind to the groups and assessments.

Participants/Inclusion and exclusion criteria

Inclusion: People with Parkinson, age between 50-70 and be agree to participate in study. Exclusion: Participant who are not interested to continue the study, Getting worse in symptoms.

Intervention groups

Intervention group: Cognitive rehabilitation program in addition to transcranial direct current stimulation (tDCS) (20 minute 2 milliampere current applied through the anode electrode on the scalp of the prefrontal dorsolateral region and the cathode electrode on the right supra orbital region) 3 times a week for 3 weeks. the duration of each session will be 45 minutes. Control group: Cognitive rehabilitation program without any tDCS stimulation 3 times a week for 3 weeks. the duration of each session will be 45 minutes.

Main outcome variables

Attention, Working memory, Response inhibition, Reaction time in people with Parkinson

General information

Reason for update

Acronym

tDCS

IRCT registration information

IRCT registration number: **IRCT20220618055211N1**
Registration date: **2022-06-24, 1401/04/03**
Registration timing: **prospective**

Last update: **2022-06-24, 1401/04/03**
Update count: **0**

Registration date

2022-06-24, 1401/04/03

Registrant information

Name

Elahe Saeidi

Name of organization / entity

Country

Iran (Islamic Republic of)

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+98 31 3682 0256

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-08-21, 1401/05/30

Expected recruitment end date

2022-11-21, 1401/08/30

Actual recruitment start date

empty

Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effects of transcranial direct current stimulation (tDCS) on attention, working memory , response inhibition and reaction time in patients with Parkinson's disease

Public title
The effect of transcranial direct current stimulation (tDCS) on cognition in people with Parkinson
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Have a definitive diagnosis of Parkinson by specialist doctor Fill the consent form Age between 50-70 Mild cognitive disorder (Montreal Cognitive Assessment (MOCA) score between 20-26)
Exclusion criteria:
Don't complete the intervention or assessment Change in medicines or any change in medical intervention. Getting worse in symptoms. Having skin problems on scalp. patient with dementia patient with Parkinson due to substance abuse. patient with sleep disorders. patient with depression.
Age
From **50 years** old to **70 years** old
Gender
Both

Phase
N/A
Groups that have been masked

- Participant
- Care provider

Sample size
Target sample size: **30**
Randomization (investigator's opinion)
Randomized
Randomization description
After selecting all samples to create a random sequence a statistical software (SAS) will be used. To consider the effect of gender, the random block method will be used in random sequence. central random method will be used to hide random sequence , as the random sequence will be at the disposal of the relevant centers and the researcher communicating with the relevant center on the basis of the arrival of the participants and ask about the random allocation.
Blinding (investigator's opinion)
Single blinded
Blinding description
The study will be single blind and the estimator will be different from the researcher. the researcher will be unaware of the grouping and outcome of primary and secondary assessments. Since the interventions of the control group and intervention group are different, the blinding of participants is impossible.
Placebo
Not used
Assignment
Parallel
Other design features
In this study, two groups will be examined. A group called the intervention group will receive transcranial direct current stimulation (tDCS) with cognitive rehabilitation training and second group called control group will receive cognitive rehabilitation training without any stimulation.

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Universiti of Social Welfare and Rehabilitation
Street address
Univercity of Rehabilitation Science and Social health, Koodakiar St., Daneshjoo Blvd., Evin,
City
Tehran
Province
Tehran
Postal code
1985713871
Approval date
2022-06-16, 1401/03/26
Ethics committee reference number
IR.USWR.REC.1401.043

Health conditions studied

1

Description of health condition studied
Parkinson's disease
ICD-10 code
G20
ICD-10 code description
Parkinson's disease

Primary outcomes

1

Description
Score obtained for attention in the Match to Sample Visual Search test
Timepoint
Measurement of attention at the beginning of the study , after 3 weeks and 1 months after the intervention.
Method of measurement
Match to Sample Visual Search test

2

Description
Score obtained for response inhibition in the Stop Signal Task test
Timepoint
Measurement of response inhibition at the beginning of the study , after 3 weeks and 1 months after the intervention.
Method of measurement
Stop Signal Task test

3

Description
Score obtained for working memory in the Spatial Span test
Timepoint
Measurement of working memory at the beginning of the study , after 3 weeks and 1 months after the intervention.
Method of measurement
Spatial Span test

4

Description
Score obtained for reaction time in the Reaction time test
Timepoint
Measurement of reaction time at the beginning of the study , after 3 weeks and 1 months after the intervention.
Method of measurement
Reaction time test

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Cognitive rehabilitation program in addition to Transcranial direct current stimulation (tDCS) (20 minute 2 milliampere current applied through the anode electrode on the scalp of the prefrontal dorsolateral region and the cathode electrode on the right supra orbital region) 3 times a week for 3 weeks. the duration of each session will be 45 minutes.
Category
Rehabilitation

2

Description
Control group: Cognitive rehabilitation program without any Transcranial direct current stimulation (tDCS) 3 times a week for 3 weeks. the duration of each session will be 45 minutes.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Isfahan University of Medical Sciences
Full name of responsible person
Hamid Reza Rostami
Street address
Isfahan University of Medical Sciences, Hezar-Jerib Ave., Isfahan
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
University of social welfare and rehabilitation sciences
Full name of responsible person
Masoud Fallahi Khoshknab
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Univercity of Rehabilitation Science and Social health, Koodakiar St., Daneshjoo Blvd., Evin,
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1985713871
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Email
fallahi@uswr.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
University of social welfare and rehabilitation 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
University of social welfare and rehabilitation sciences
Full name of responsible person
Elahe Saeidi
Position
Student
Latest degree
Bachelor
Other areas of specialty/work
Occupational Therapy
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No.179,Yas Ave., Farvardin Blvd., Baharestan Town
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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
Not applicable
Analytic Code
Yes - There is a plan to make this available
Data Dictionary
Yes - There is a plan to make this available
Title and more details about the data/document
All data is potentially shareable after unidentifiable individuals
When the data will become available and for how long
Access period starts 6 months after the results are published
To whom data/document is available
All individuals, including researchers working in academic and scientific institutions and those working in the clinics, can apply for the data.
Under which criteria data/document could be used
The data will be provided to researchers for further studies or to use this data for related research.
From where data/document is obtainable
Elahe Saeidi Email: ot.saeidi@gmail.com Address: No.179,Yas Ave., Farvardin Blvd., Baharestan Town, Isfahan phone :09134253249 Hojjatullah Haghgoo Email: h.haghgoo@yahoo.com Address: Department of Occupational therapy, University of Rehabilitation and Social health, Koodakyar St., Daneshjoo Blvd., Evin, Tehran, phone: 02122180063
What processes are involved for a request to access data/document

Files and documents will be provided to the applicant through correspondence and application to the Department of Occupational therapy of the University of Rehabilitation and Social health and the approval of the director and deputy director of the Department of Occupational therapy.

Comments