Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

The effectiveness of computer-based cognitive rehabilitation therapy in improving memory, attention and executive function of patients with dementia after stroke

Protocol summary

Study aim

The effect of computer-based cognitive restoration on improving memory, attention and executive function in patients with dementia

Design

This study was performed as a clinical trial with parallel and randomized groups on 30 patients with dementia due to stroke and these patients were randomly divided into two groups of education and control.

Settings and conduct

First, patients who meet the inclusion criteria will be examined and randomly assigned to the control and experimental groups, and then cognitive rehabilitation will be performed in 15 sessions of 30 minutes at the Baghcheban Cognitive Rehabilitation Clinic in Arak for the experimental group. Finally, the two groups will be evaluated for dependent outcomes.

Participants/Inclusion and exclusion criteria

inclusion criteria : Patients with dementia who have had a stroke for at least 3 months , age 30-70 years old Non-entry criteria : Having diabetes , Cerebral venous thrombosis , Head and neck injuries , History of chronic heart failure with EF less than 30% , History of dementia medications

Intervention groups

Intervention group: The protocol of cognitive rehabilitation intervention using a computer includes training on the functions of continuous attention, selective attention, focused attention, continuous attention, response inhibition, and short-term memory in each session, respectively. The number of cognitive rehabilitation sessions is 20 30-minute sessions twice a week. This protocol is based on Sulberg & Matter's (2004) Attention Processing Training Protocol. Control group: No educational intervention.

Main outcome variables

n order to perform pre-test and post-test for the "attention" variable, continuous and simple stropping tests will be used, for the "memory" variable, MoCA and MMSE, and for the "executive performance" variable, the Wisconsin test will be used.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191104045328N8**
Registration date: **2022-01-01, 1400/10/11**
Registration timing: **prospective**

Last update: **2022-01-01, 1400/10/11**
Update count: **0**

Registration date

2022-01-01, 1400/10/11

Registrant information

Name

Amin Haji seyyed hoseini

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 86 3366 7583

Email address

amin.medstu@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-01-05, 1400/10/15

Expected recruitment end date

2022-03-06, 1400/12/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effectiveness of computer-based cognitive rehabilitation therapy in improving memory, attention and executive function of patients with dementia after stroke

Public title

The effect of computer-based cognitive restoration on improving memory, attention and executive function in patients with dementia

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients with dementia who have had a stroke for at least 3 months. age 30-70

Exclusion criteria:

Having diabetes Cerebral venous thrombosis Head and neck injuries History of chronic heart failure with EF less than 30% History of dementia medications

Age

From **30 years** old to **70 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

Participants are assigned to two intervention and control groups, respectively, based on the randomization sequence that will be generated beforehand. This sequence is unpredictable and its arrangement is completely random. Block randomization method with 8 blocks will be used to allocate samples. Thus, using block numerical random number generation software, a randomization sequence proportional to the sample size required for the two groups will be generated. Initially, all cases in which the two letters A and B can be arranged in blocks of 8 are produced. A block is then randomly selected from the blocks and the layout pattern in that block will be used to assign participants. This block will then be placed in the main container and another block will be selected again. All this will be done with software called Sealed Envelope. With this method, concealment will also be observed. The concept of concealment is to unpredictably assign individuals to groups. In fact, the researcher will not be able to predict which group the next person will be in.

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Islamic Azad University, Arak Branch

Street address

Arak, Imam Khomeini Square, Imam Khomeini Boulevard, 3 km of Khomeini Road, Amirkabir University Town

City

Arak

Province

Markazi

Postal code

3836119131

Approval date

2021-08-29, 1400/06/07

Ethics committee reference number

IR.IAU.ARAK.REC.1400.019

Health conditions studied

1

Description of health condition studied

Stroke dementia

ICD-10 code

F01.51

ICD-10 code description

Vascular dementia with behavioral disturbance

Primary outcomes

1

Description

Attention

Timepoint

Before and after the intervention

Method of measurement

continuous and simple stropping tests

2

Description

Memory

Timepoint

Before and after the intervention

Method of measurement

Montreal cognitive assessment and Mini-Mental state examination

3

Description
executive performance
Timepoint
Before and after the intervention
Method of measurement
Wisconsin test

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: The protocol of cognitive rehabilitation intervention using a computer includes training on the functions of continuous attention, selective attention, focused attention, continuous attention, response inhibition, and short-term memory in each session, respectively. The number of cognitive rehabilitation sessions is 20 30-minute sessions twice a week. This protocol is based on Sulberg & Matter's (2004) Attention Processing Training Protocol.
Category
Behavior

2

Description
Control group: No educational intervention.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Arak Amir Kabir Hospital
Full name of responsible person
Dr Mostafa Nokani
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Islamic Azad University
Full name of responsible person
Dr Ali Hasani Josheghani
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Arak, Imam Khomeini Square, Imam Khomeini Boulevard, 3 km of Khomeini Road, Amirkabir University Town
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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
Islamic Azad University
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
Islamic Azad University
Full name of responsible person
Rezvan Nemati
Position
Student
Latest degree
Bachelor
Other areas of specialty/work
Psychology
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Person responsible for scientific inquiries

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Full name of responsible person
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Position
Associate professor

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Specialist

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Neurology

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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
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
After conducting this study and analytical studies on it, only a part of the data such as information about the main outcome and patient demographic information will be published to the researchers who do the necessary correspondence with the person in charge of this study.

When the data will become available and for how long
Access will be from 2022/4/20 to 2026/4/20 for 4 years.

To whom data/document is available
University researchers

Under which criteria data/document could be used
If there are any further questions

From where data/document is obtainable
Dr Mostafa Nokani

What processes are involved for a request to access data/document
Letter writing should be done with professors and universities.

Comments