

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jun 2026

The Comparison of effect of working memory rehabilitation and cognitive and metacognitive strategies on the function of the dorso- lateral frontal lobe of elderly men

Protocol summary

Study aim

The purpose of this study was to investigate some cognitive functions of the dorsolateral frontal lobe (information processing speed, memory span, visual memory, attention continuity) in the elderly before and after training to evaluate rehabilitation training methods and improve cognitive abilities of the elderly

Design

The study group comprises elderly residing in the Milad Bukan nursing home, aged 65 to 85 years, male and Simple method random sampling and referred to from June to September 2019. And their replacement will be random. 45 people (three groups of 15) are selected and participate in the study. How to assign individuals to groups at the sampling stage and at the replacement stage will be the lottery without placement.

Settings and conduct

Place of Study: Bukan City, Milad Nursing Home. Pre-test run on all three group: experimental group 1, experimental group 2 and control group. How to do the research: Cognitive and metacognitive strategies rehabilitation training in 8 50-minute sessions as a group, Working memory rehabilitation training in 18 60 minutes sessions as a group. The control group will receive no training. Post-test was performed on all three group: experimental group 1, experimental group 2 and the control group

Participants/Inclusion and exclusion criteria

Inclusion criteria: Informed consent, 65 to 85 years old, Ability to read and write Exclusion criteria: Acute and chronic psychological disorders as a result of Mental Status Exam (MSE) by a psychiatrist, Existence of severe physical illnesses according to physician examination

Intervention groups

Experimental group 1: Rehabilitation training of cognitive and metacognitive strategies Experimental group 2: Working memory rehabilitation training Group 3: Control

group (without intervention)

Main outcome variables

information processing speed, memory span, visual memory, attention continuity

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190910044737N1**

Registration date: **2020-02-25, 1398/12/06**

Registration timing: **retrospective**

Last update: **2020-02-25, 1398/12/06**

Update count: **0**

Registration date

2020-02-25, 1398/12/06

Registrant information

Name

Mansour Mahmoudiaghdam

Name of organization / entity

The University of urmia

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-05-22, 1398/03/01

Expected recruitment end date

2019-09-16, 1398/06/25

Actual recruitment start date

2019-05-22, 1398/03/01

Actual recruitment end date

2019-09-16, 1398/06/25

Trial completion date

2019-09-16, 1398/06/25

Scientific title

The Comparison of effect of working memory rehabilitation and cognitive and metacognitive strategies on the function of the dorso- lateral frontal lobe of elderly men

Public title

The effect of working memory rehabilitation and cognitive and metacognitive strategies on the functions of the dorso- lateral frontal lobe of the elderly men

Purpose

Education/Guidance

Inclusion/Exclusion criteria**Inclusion criteria:**

Complete the form of informed consent Ability to read and write

Exclusion criteria:

Psychiatric disorders based on clinical interview by a psychiatrist Significant physical illness based on physician examination

Age

From **65 years** old to **85 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **45**

Actual sample size reached: **45**

Randomization (investigator's opinion)

Randomized

Randomization description

Simple randomization: In the simple random sampling method in this study, given that the list of all members of the target population is available, all individuals are named in a box and by lottery, the sample individuals are selected without placement, ie after each individual is selected. Its name will not be returned to the community again

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 Urmia University of Medical Sciences

Street address

Urmia University of Medical Sciences Central Site, Orjhans Street, Resalat Blvd

City

Urmia

Province

West Azarbaijan

Postal code

5714783734

Approval date

2019-05-15, 1398/02/25

Ethics committee reference number

IR.UMSU.REC.1398.142

Health conditions studied**1****Description of health condition studied**

Cognitive status of the elderly

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Information Processing Speed

Timepoint

Measuring Information Processing Speed at baseline (before training) and immediately after training

Method of measurement

Stroop Test

2**Description**

Memory Span

Timepoint

Measuring memory span at baseline (before training) and immediately after training

Method of measurement

Wechsler digit span test

3**Description**

Sustained Attention

Timepoint

Measuring sustained Attention at baseline (before training) and immediately after training

Method of measurement

Continuous Performance Test

4

Description

Visual Memory

Timepoint

Measuring visual memory at baseline (before training) and immediately after training

Method of measurement

Kim karad visual memory test

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: First, pre-test. The intervention group attends 8 50-minute sessions conducted by the researcher in the presence of a psychologist and undergoing cognitive and meta-cognitive rehabilitation training. the sessions will include training in repetitive strategies, development strategies, relationship analysis training, training in organizing strategies, planning, evaluation, and ordering. then the post-test is performed and the pre-test results are compared with the post-test.

Category

Rehabilitation

2

Description

Intervention group 2: Pre-test first. The intervention group participates in 18 60-minute sessions conducted by the researcher in the presence of a psychologist's associate and receives active memory rehabilitation training. The content of the sessions consists of remembering training, remembering training, training in brainstorming techniques, enhancing visual and auditory perception. then the post-test is performed and the pre-test results are compared with the post-test.

Category

Rehabilitation

3

Description

Control group: this group does not receive any intervention. Dependent variables (information processing speed, sustained attention, memory span, visual memory) are measured in pre-test and post-test and compared.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Milad Bukan Elderly nursing home

Full name of responsible person

Ahmad salehi

Street address

Salmandan Street, Pasdaran Blvd

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Urmia

Full name of responsible person

Esmail Soleimani

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Phone

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Email

soleymany.psy@gmail.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

The University of Urmia

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

The University of Urmia

Full name of responsible person

mansour mahmoudi aghdam

Position

PhD student

Latest degree

Master

Other areas of specialty/work

Psychology

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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

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available