Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 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

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Mansour Mahmoudiaghdam
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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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Bukan
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West Azarbaijan
Postal code
55918-33358
Phone
+98 44 4622 9650
Fax
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Email
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
The University of Urmia
Full name of responsible person
Esmaeil Soleimani
Street address
11km Sero Road
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Province
West Azarbaijan
Postal code
5756151818
Phone
+98 44 3375 0741
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
Street address
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Person responsible for updating data

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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