

Clinical Trial Protocol

Iranian Registry of Clinical Trials

16 Sep 2026

The effects of hand exercises program on cognitive function and activities of daily living in people 60 years and older

Protocol summary

Summary

Objectives: The purpose of this study is to evaluate the effects of hand exercises program on cognitive function and activities of daily living in people 60 years and older.

Design: Participants are selected from healthy elderly men and women, aged 60 and elders, in elderly care centers. 20 participants are randomly assigned into control or intervention group by coded envelop. Setting and conduct: Evaluations are done four times before and after the intervention, three weeks after intervention and a month after intervention by a trained Occupational Therapist who is blind to type of group. Participants: Subjects must have Cognitive, Vision, Hearing, Cardiovascular, Orthopedic, Rheumatologic and Neurological health and can read and write in Persian.

Intervention: After the baseline assessments, treatment sessions are given, 3 sessions per week, each session about 60 minutes for 6 weeks. Each session of Treatment includes: Resistive exercise with Putty for hand muscles (Thenar and Hypothenar) and dexterity exercises based on Activities of Daily Living, such as writing, open and close button,....Main outcome measures: Barthel-Index Assessment Test is performed to determine ability level in activities of daily living and Stroop test and Wechsler scale are done for cognitive function.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201608213551N3**

Registration date: **2016-08-28, 1395/06/07**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2016-08-28, 1395/06/07

Registrant information

Name

Parvin Raji

Name of organization / entity

Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 7753 8798

Email address

praji@tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for education, Tehran University of Medical Sciences

Expected recruitment start date

2015-09-30, 1394/07/08

Expected recruitment end date

2016-09-30, 1395/07/09

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effects of hand exercises program on cognitive function and activities of daily living in people 60 years and older

Public title

The effects of hand exercises program on cognitive function and activities of daily living in people 60 years and older: A Randomized Clinical Trial

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: Seniors 60 years and older interested

in participating in the study (informed consent); Lack of vision and hearing problems; MMSE score higher than 21; Minimum level of education to Fifth-grade; Ability to communicate and answer questions in Persian; Lack of Cardiovascular disease; Lack of acute Orthopedic problems, Neurological and Rheumatological disorder that leads to conflict and pain in the upper extremity; Lack of depression and anxiety disorders based on medical records. Exclusion criteria: Lack of cooperation and willingness to withdraw subjects during sessions assessment and intervention

Age

From **60 years** old to **80 years** old

Gender

Both

Phase

2

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

Not used

Assignment

Parallel

Other design features

Secondary Ids

1

Registry name

There is not

Secondary trial Id

There is not

Registration date

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Tehran University of Medical Sciences

Street address

Tehran University of Medical Sciences, Poursina St, Ghods St, Keshavarz Blvd.

City

Tehran

Postal code

Approval date

2016-01-13, 1394/10/23

Ethics committee reference number

IR.TUMS.REC.1394.1645

Health conditions studied

1

Description of health condition studied

people 60 years and older

ICD-10 code

M62.5

ICD-10 code description

Muscle wasting and atrophy, not elsewhere classified

Disuse atrophy NEC

Primary outcomes

1

Description

Activities of daily living

Timepoint

before intervention, three weeks after intervention, after intervention, A month after intervention

Method of measurement

Barthel Index

Secondary outcomes

1

Description

cognitive function

Timepoint

before intervention, three weeks after intervention, after intervention, a month after intervention

Method of measurement

Stroop test, Wechsler scale

Intervention groups

1

Description

Intervention 1: Dexterity exercises for hand muscles based on Activities of Daily Living

Category

Rehabilitation

2

Description

Intervention 2: Traditional occupational therapy interventions

Category

Rehabilitation

3

Description

Intervention1: Resistive exercises for hand muscles with putty

Category

Rehabilitation

Recruitment centers**1****Recruitment center****Name of recruitment center**

Tehran University of Medical Sciences

Full name of responsible person

Parvin Raji

Street address

Rehabilitation faculty of Tehran University of Medical Sciences, Picheshemiran, Enghelab Ave, Tehran

City

Tehran

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Vice chancellor for education, Tehran University of Medical Sciences

Full name of responsible person

Parvin Raji

Street address

Rehabilitation faculty of Tehran University of Medical Sciences, Picheshemiran, Enghelab Ave, Tehran, Iran

City

Tehran

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Vice chancellor for education, Tehran University of Medical Sciences

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**

Tehran University of Medical Sciences

Full name of responsible person

Parvin Raji

Position

lecturer

Other areas of specialty/work**Street address**

Rehabilitation faculty of Tehran University of Medical Sciences, Picheshemiran, Enghelab Ave, Tehran, Iran

City

Tehran

Postal code**Phone**

+98 21 7753 3939

Fax**Email**

praji@tums.ac.ir

Web page address**Person responsible for scientific inquiries****Contact****Name of organization / entity**

Tehran University of Medical Sciences

Full name of responsible person

Parvin Raji

Position

lecturer

Other areas of specialty/work**Street address**

Rehabilitation faculty of Tehran University of Medical Sciences, Picheshemiran, Enghelab Ave, Tehran, Iran

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+98 21 7753 3939

Fax**Email**

praji@tums.ac.ir

Web page address

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