

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jun 2026

Comparison of the effectiveness of dual tasks cognitive-motor and motor-motor on cognitive and motor function in patients with multiple sclerosis

Protocol summary

Study aim

The main purpose of this study was to improve patients' cognitive and motor function using dual tasks.

Design

A clinical trial consisting of 3 intervention groups and a control group, with parallel, on 60 patients.

Settings and conduct

The participants of this study were patients of MS in Tehran province. Using G-Power software with test power of 0.8, the effect size of 0.8 and an error level of 0.05, the sample size of 60 people was determined. Out of 78 participants, 60 were selected as eligible for the study. And were divided into 4 groups by the examiner. All stages of the research were held in the training hall of Tehran MS Association.

Participants/Inclusion and exclusion criteria

Low to moderate disability, no replace in recent months, no physical, mental, and emotional problems, no addiction

Intervention groups

Group (1) dual cognitive-motor tasks; Group (2) dual motor-motor tasks; Individual groups (3) who only did walking exercises and (4) controls who went about their daily lives.

Main outcome variables

the balance; walking; Speed and accuracy of information processing; Quality of Life; Depressive Anxiety

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200812048384N1**

Registration date: **2020-08-26, 1399/06/05**

Registration timing: **retrospective**

Last update: **2020-08-26, 1399/06/05**

Update count: **0**

Registration date

2020-08-26, 1399/06/05

Registrant information

Name

Arash Abasnia

Name of organization / entity

The university of tehran

Country

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-07-23, 1398/05/01

Expected recruitment end date

2019-07-30, 1398/05/08

Actual recruitment start date

2019-07-23, 1398/05/01

Actual recruitment end date

2019-08-04, 1398/05/13

Trial completion date

2019-11-09, 1398/08/18

Scientific title

Comparison of the effectiveness of dual tasks cognitive-motor and motor-motor on cognitive and motor function in patients with multiple sclerosis

Public title

"The effect of dual-task training on cognitive and motor rehabilitation of MS patients"

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Having an Expanded Disability Status Scale (EDSS) 2-5
 Age range 20-50 Do not use assistive devices for walking
 No dementia Ability to walk 10 meters without assistance
 At least a diploma 30 days have passed since the last relapse of the patient

Exclusion criteria:

Addiction to drugs or alcohol Having a motor defect in the limbs History of heart attack or stroke Having psychological problems Participate in another study Do not participate in sports classes such as yoga, Pilates, etc

Age

From **20 years** old to **50 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **60**

Actual sample size reached: **60**

Randomization (investigator's opinion)

Not randomized

Randomization description**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 the Faculty of Physical Education and Sports Sciences - University of Tehran

Street address

Second floor., No. 180, Darvish St., Hosseini St., Qazvin St

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Tehran

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Postal code

۱۴۱۷۹۳۵۸۴-

Approval date

2019-07-15, 1398/04/24

Ethics committee reference number

IR.UT.SPORT.REC.1398.049

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

Multiple sclerosis

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

Balance

Timepoint

Measurement of balance tests before and after 8 weeks of intervention

Method of measurement

Special functional tests of balance

2**Description**

Walking

Timepoint

Measurement of walking tests before and after 8 weeks of intervention

Method of measurement

Timed up and go

3**Description**

Information processing speed

Timepoint

Measurement of information processing speed tests before and after 8 weeks of intervention

Method of measurement

Stroop online test

4**Description**

Accuracy of information processing

Timepoint

Measurement of information processing Accuracy tests before and after 8 weeks of intervention

Method of measurement

Stroop online test

5**Description**

Quality of Life

Timepoint

Measurement of information before and after 8 weeks of intervention

Method of measurement

MSIS-29 questionnaire

6

Description

Depressive Anxiety

Timepoint

Measurement of information before and after 8 weeks of intervention

Method of measurement

Hospital Anxiety Depression Scale

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: Cognitive-motor group for two months, 2 days a week and 45-60 minutes. Double cognitive-motor tasks with one cognitive task (such as counting backwards) and one motor task (such as walking over an obstacle) Did.

Category

Rehabilitation

2

Description

Intervention group 2: The motor-motor group practiced dual motor-motor tasks (such as walking and wearing a warm-up) for two months, 2 days a week and 45-60 minutes.

Category

Rehabilitation

3

Description

Intervention group 3: Individual homework group practiced walking for 2 months, 2 days a week and 45-60 minutes of different exercises.

Category

Rehabilitation

4

Description

Control group: The control group did not have any exercise during the eight weeks of training.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Iran MS Society

Full name of responsible person

Dr. Mousavi

Street address

No. 35, Mohammad Shams Alley, Vesal Shirazi St.,
Enghelab St., Tehran

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<http://www.iranms.ir/>

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Tehran

Full name of responsible person

Mehdi Shahbazi

Street address

Faculty of Physical Education and Sport Sciences,
between 15th and 16th St., North Kargar st., Tehran,
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Email

infosport@ut.ac.ir

Web page address

<http://sport.ut.ac.ir>

Grant name

Grant code / Reference number

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

No

Title of funding source

Faculty of Physical Education, University of Tehran

Proportion provided by this source

100

Public or private sector

Private

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 Tehran

Full name of responsible person

Arash Abasnia

Position

Senior students

Latest degree

Master

Other areas of specialty/work

Others

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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

All data of the measured variables can be shared after
identifying individuals

When the data will become available and for how long

Start of access period from 2020

To whom data/document is available

Only for researchers working in academic and scientific
institutions

Under which criteria data/document could be used

Scientific use is permitted in improvement and
comparison with other research

From where data/document is obtainable

Email address for correspondence

What processes are involved for a request to access data/document

The applicant must send the reason for using the
documents by e-mail

Comments