

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

05 Aug 2026

### Effects of Visual Perception Interventions in Comparison with Conventional Occupational Therapy Interventions on Occupational Performance and Satisfaction in Performing Daily Activities in People with Multiple Sclerosis

#### Protocol summary

##### Study aim

Effects of Activity Based Visual perception Interventions in comparison with Conventional Occupational Therapy Interventions on Occupational Performance and Satisfaction in Performing Daily Activities in People with Multiple Sclerosis

##### Design

Clinical randomized, with two parallel groups

##### Settings and conduct

After approving the research plan and obtaining the code of ethics, we go to Tehran Occupational Therapy Clinics .Written consent is given to patients to complete.inclusion criteria measurement(MMSE, visual acuity, DTVP-A) will be done for patients who accept to be in this project. assessments before and after intervention involve canadian occupational performance, depth perception, visual evoked potential(VEP).intervention group receive visual perception intervention and control group receive occupational therapy for 2 sessions per week, 30 minutes per sessions for four weeks.patients will be followed up one month after intervention.

##### Participants/Inclusion and exclusion criteria

inclusion criteria:age between 18 to 50;at least 3 months after relapse of disease;developmental test of visual perception-adolescent and adult score below 90;mini mental status evaluation above 21;normal sightedness or corrected by assistive devices Non-inclusion criteria:systemic disease diabetes or any disease other than ms; that affects visual system;not cooperating in project

##### Intervention groups

intervention group:visual perception: receive activity based visual perception intervention with 3 dimensional pen in each session patinet should complete 4 stages.  
control group:conventional occupational therapy: receive

interventions include rehabilitation of praxi and motor skills, sensory perceptual skills, emotional regulation, social skills, activities daily of living and assistive device recommendation

##### Main outcome variables

Work performance score in daily activities; depth perception; Path of vision

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20120910010806N9**

Registration date: **2019-10-31, 1398/08/09**

Registration timing: **retrospective**

Last update: **2019-10-31, 1398/08/09**

Update count: **0**

##### Registration date

2019-10-31, 1398/08/09

##### Registrant information

##### Name

Malahat Akbarfahimi

##### Name of organization / entity

Iran University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 2222 7124

##### Email address

akbarfahimi.m@iums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

**Expected recruitment start date**

2019-01-21, 1397/11/01

**Expected recruitment end date**

2019-08-28, 1398/06/06

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

Effects of Visual Perception Interventions in Comparison with Conventional Occupational Therapy Interventions on Occupational Performance and Satisfaction in Performing Daily Activities in People with Multiple Sclerosis

**Public title**

Effects of Activity Based Interventions on Performance in People with Multiple Sclerosis

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

Age Between 18 and 50 years Multiple Sclerosis Diagnosed by Neurologist DTVP-A Score Below 90 MMSE Score Above 21 Normal Sightedness or Corrected with Assistive Devices The Hand has the Ability to Grip and Use Three-dimensional Printing pen At least 3 months have passed from relapse of the disease

**Exclusion criteria:**

Having Systemic Diseases, Diabetes and any Disease other than MS that Affects the Visual System Not Cooperating in Project

**Age**From **18 years** old to **50 years** old**Gender**

Both

**Phase**

N/A

**Groups that have been masked***No information***Sample size**Target sample size: **10****Randomization (investigator's opinion)**

Randomized

**Randomization description**

The sampling method will be simple random sampling and by lottery method. the name of each patient is written on a piece of paper and placed inside the box. then pieces of paper extracted individually to complete the sample size for the intervention and control group

**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**

Iran University of Medical Sciences and health services

**Street address**

Iran University of Medical Sciences., Shahid Hemmat highway., Tehran., Iran

**City**

Tehran

**Province**

Tehran

**Postal code**

1449614353

**Approval date**

2018-12-09, 1397/09/18

**Ethics committee reference number**

IR.IUMS.REC.1397.651

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

multiple sclerosis

**ICD-10 code**

G35

**ICD-10 code description**

Multiple sclerosis

**Primary outcomes****1****Description**

Occupational performance score in performing daily activities

**Timepoint**

Pre and post treatment

**Method of measurement**

Canadian occupational performance measure (COPM)

**2****Description**

Satisfaction score in performing daily activities

**Timepoint**

Pre and post treatment

**Method of measurement**

Canadian occupational performance measure

**Secondary outcomes**

## 1

### **Description**

depth perception

### **Timepoint**

pre and post treatment

### **Method of measurement**

depth perception peg board

## 2

### **Description**

visual pathway

### **Timepoint**

pre and post treatment

### **Method of measurement**

visual evoked potential

## **Intervention groups**

## 1

### **Description**

The intervention group receives visual perception interventions with a three-dimensional printing pen for 2 sessions per week, 30 minutes per sessions for four weeks. In the first session in addition to the explanation, therapist produces a three dimensional design in order to teach the method. In each session, the therapist presents a plan for producing a three-dimensional image for patient. In each session, four steps should be performed by the patient. In the first stage, Drawing lines on the plane. In this step, patients drew objects such as triangles or pentagons using stencils from the website (<http://the3doodler.com/projects/>). in the second stage, Drawing lines in the 3D space. In this step, patients recognized a 3D structure on paper and then drew lines in 3D space to recreate the same 3D structures dimensional space, in the third stage, Making structures by attaching 2D outputs. In this step, patients drew lines in separate planes using stencils and attached the planes to produce a complete 3D structure in the forth stage, Making structures by connecting 2D outputs with additional 3D drawing. In this step, patients drew lines using stencils and connected the plane lines to each other to produce a complete 3D structure with appropriate spatial configuration

### **Category**

Rehabilitation

## 2

### **Description**

Control group: Receives conventional occupational therapy interventions for 8 sessions 2 times a week and 30 minutes per session. Interventions include:stretching and spasm control exercises using with theraband and wedge, gross motor skills and balance using with steps, balance beam , parallel bars and tilt board and fine motor skills using with putty, peg board , eye hand coordination and eye foot coordination exercises with ball and peg board,exercises in PNF technic and activities daily of living.

### **Category**

Rehabilitation

## **Recruitment centers**

## 1

### **Recruitment center**

#### **Name of recruitment center**

Rofeideh rehabilitation hospital

#### **Full name of responsible person**

Dr Mojtaba Azimian

#### **Street address**

Nemati st., Shahid baradaran soleimani Ave.,  
Qetariyeh

#### **City**

Tehran

#### **Province**

Tehran

#### **Postal code**

1935973476

#### **Phone**

+98 21 2267 8504

#### **Fax**

#### **Email**

rofeidehhospital@uswr.ac.ir

## **Sponsors / Funding sources**

## 1

### **Sponsor**

#### **Name of organization / entity**

Iran University of Medical Sciences

#### **Full name of responsible person**

Dr Malahat Akbarfahimi

#### **Street address**

Occupational Therapy department-School of  
Rehabilitation Sciences- Madadkaran alley- Shah-  
Nazari st-Madar Square-Mirdamad AVE

#### **City**

Tehran

#### **Province**

Tehran

#### **Postal code**

1545913487

#### **Phone**

+98 21 2222 2059

#### **Email**

akbarfahimi.m@iums.ac.ir

### **Grant name**

Research deputy of Iran University of Medical Sciences

### **Grant code / Reference number**

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

Yes

### **Title of funding source**

Iran University of Medical Sciences

### **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**

Iran University of Medical Sciences

**Full name of responsible person**

Yasaman Rezaei

**Position**

Master candidate of occupational therapy

**Latest degree**

Bachelor

**Other areas of specialty/work**

Occupational Therapy

**Street address**

Occupatioanal Therapy department., School of rehabilitation sciencs.,Madadkaran Alley., Shah-Nazari Ave.,Madar Sq.,Mirdamad Blvd

**City**

Tehran

**Province**

Tehran

**Postal code**

1545913487

**Phone**

+98 21 2222 2059

**Email**

yasamanrezaei@gmail.com

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

Iran University of Medical Sciences

**Full name of responsible person**

Dr Malahat Akbarfahi,i

**Position**

Ph.D. in neurocience- Faculty of Iran University of Medical Sciences

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Neuroscience

**Street address**

Occupational Therapy depatrment., School of rehabilitation., Madadkaran Ave., Shah-Nazari Ave., Madar Sq., Mirdamad Blvd

**City**

Tehran

**Province**

Tehran

**Postal code**

1545913478

**Phone**

+98 21 2222 2059

**Email**

akbarfahimi.m@iums.ac.ir

**Person responsible for updating data****Contact****Name of organization / entity**

Iran University of Medical Sciences

**Full name of responsible person**

Yasaman Rezaei

**Position**

Master candidate of Occupational Therapy

**Latest degree**

Bachelor

**Other areas of specialty/work**

Occupational Therapy

**Street address**

Occupatiinal Therapy department., School of rehabilitation sciences., Madadkaran Ave., Shah-nazar Ave., Madar Sq., Mirdamad Blvd

**City**

Tehran

**Province**

Tehran

**Postal code**

1545913487

**Phone**

+98 21 2222 7124

**Email**

yasamanrezaei@gmail.com

**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**

Article Published

**When the data will become available and for how long**

6 months after publication

**To whom data/document is available**

The researchers and Occupational Therapists

**Under which criteria data/document could be used**

Other research, critics, check and clinical usage

**From where data/document is obtainable**

First person in article

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

Send request by email

## Comments