

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

29 Jun 2026

### Effects of cognitive rehabilitation based on computer tasks on cognitive dysfunction in patients with Schizophrenia

#### Protocol summary

##### Study aim

Effects of cognitive rehabilitation based on computer tasks on cognitive dysfunction in patients with Schizophrenia

##### Design

Clinical trial with control and parallel groups, randomized and not blinded

##### Settings and conduct

This study will be performed on 30 patients with schizophrenia referring to Ibn-e-Sina psychiatric Hospital. Patients are randomly assigned one of the two groups of control and intervention. Patients in both groups are prescribed medication and attend psychological skills training session for schizophrenia for 8 weeks. In the intervention group, in addition to medication, patients receive cognitive rehabilitation based on computer tasks. Before and after the interventions in both groups, cognitive assessment tests are performed and the results and the effectiveness of each group are compared.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: patients with schizophrenia between 18 and 60 years; patients must be deficient in several cognitive domains; the patient has no other problem or psychiatric disorder; the patient does not have a record of proven mental disability; the patient has not received Electroconvulsive therapy in the past year; the patient has the ability to read and write. Exclusion criteria: pregnancy and breastfeeding

##### Intervention groups

In both groups, patients in remission and stabilization phase of the disease receive the medication prescribed by the psychiatrist for eight weeks. Also, psychological skills training for schizophrenia will be done twice a week for 10 minutes in both groups. In the intervention group, cognitive exercises using Captain's Log computer software will be done twice a week for 20 minutes each session and in the control group, 20-minute videos containing images of landscapes will be played each

session.

##### Main outcome variables

Cognitive functions, memory, attention

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20101130005280N36**

Registration date: **2021-05-05, 1400/02/15**

Registration timing: **prospective**

Last update: **2021-05-05, 1400/02/15**

Update count: **0**

##### Registration date

2021-05-05, 1400/02/15

##### Registrant information

##### Name

Raheleh Nejati

##### Name of organization / entity

Mashhad University of Medical Sciences, Ibn-e- Sina Psychiatric Hospital

##### Country

Iran (Islamic Republic of)

##### Phone

+98 51 3711 2540

##### Email address

nejatir2@mums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2021-05-20, 1400/02/30

##### Expected recruitment end date

2021-11-21, 1400/08/30

##### Actual recruitment start date

empty

**Actual recruitment end date**  
empty

**Trial completion date**  
empty

**Scientific title**  
Effects of cognitive rehabilitation based on computer tasks on cognitive dysfunction in patients with Schizophrenia

**Public title**  
Effects of computer tasks on improvement of cognitive functions in schizophrenic patients

**Purpose**  
Treatment

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Patients with schizophrenia between 18 and 60 years  
Patients must be deficient in several cognitive domains.  
The patient has no other problem or psychiatric disorder.  
The patient does not have a record of proven mental disability  
The patient has not received Electroconvulsive therapy in the past year. The patient has the ability to read and write.  
**Exclusion criteria:**  
Pregnancy and breastfeeding.

**Age**  
From **18 years** old to **60 years** old

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**  
*No information*

**Sample size**  
Target sample size: **30**

**Randomization (investigator's opinion)**  
Randomized

**Randomization description**  
The envelopes will be prepared by one of the members of the research team and the random numbers generated by the "www.randomization.com" website will be printed and placed in each envelope. The envelopes are sealed and their contents are not visible from outside. At first, purpose of the study is explained for each participants and after filling out the consent form, each participant selects an envelope and opens it and based on its content, the participant will be placed in either control or intervention 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

Ethics Committee of Mashhad University of Medical Sciences

##### Street address

Central Building of Mashhad University of Medical Sciences (Ghorshi), Daneshgah 16, Daneshgah street

##### City

Mashhad

##### Province

Razavi Khorasan

##### Postal code

9138813944

##### Approval date

2019-06-25, 1398/04/04

##### Ethics committee reference number

IR.MUMS.MEDICAL.REC.1398.555

## Health conditions studied

### 1

#### Description of health condition studied

Schizophrenia

#### ICD-10 code

F20

#### ICD-10 code description

Schizophrenia

## Primary outcomes

### 1

#### Description

Cognitive functions

#### Timepoint

At the beginning of the intervention, week 4, week 8 (end on intervention), week 12 & week 20 after the intervention

#### Method of measurement

Stroop test

### 2

#### Description

Memory

#### Timepoint

At the beginning of the intervention, week 4, week 8 (end on intervention), week 12 & week 20 after the intervention

#### Method of measurement

Rey auditory verbal learning test and Rey-Osterrieth complex figure test

### 3

#### Description

Attention

### Timepoint

At the beginning of the intervention, week 4, week 8 (end on intervention), week 12 & week 20 after the intervention

### Method of measurement

Digit span test

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Control group: In this group, patients who are in remission and stabilization phase of the disease receive the medication prescribed by the psychiatrist for eight weeks. Also, psycho-educational programs and classes for schizophrenic patients will be held twice a week for 8 weeks. Each session lasts 10 minutes and each week, one of the 8 topics of "introduction to schizophrenia, causes of the disease, treatment, ways to deal with the recurrence of the disease, dealing with hallucinations, problem-solving, cognitive improvement and leisure time" are explained. In addition, a 20-minute video containing images of landscapes will be played each session.

#### Category

Treatment - Drugs

### 2

#### Description

Intervention group: In this group, patients who are in remission and stabilization phase of the disease receive the medication prescribed by the psychiatrist for eight weeks. Also, psycho-educational programs and classes for schizophrenic patients will be held twice a week for 8 weeks. Each session lasts 10 minutes and each week, one of the 8 topics of "introduction to schizophrenia, causes of the disease, treatment, ways to deal with the recurrence of the disease, dealing with hallucinations, problem-solving, cognitive improvement and leisure time" are explained. In addition, cognitive exercises using Captain's Log computer software will be done twice a week for 20 minutes each session to develop cognitive skills. This software includes training on attention skills using "Drum Signals" and "Musical Pairs" tests and memory skills using "What's Next" and "Match Play" tests.

#### Category

Treatment - Drugs

## Recruitment centers

### 1

#### Recruitment center

**Name of recruitment center**  
Ibn-e-Sina psychiatric Hospital

#### Full name of responsible person

Dr. Farhad Faridhoseini

#### Street address

Ibn-e-Sina psychiatric Hospital, Horre ameli avenue,boo Ali square

#### City

Mashhad

#### Province

Razavi Khorasan

#### Postal code

8313491959

#### Phone

+98 51 3711 2540

#### Email

faridhoseinif@mums.ac.ir

### 2

#### Recruitment center

##### Name of recruitment center

Hejazi Psychiatric Hospital

##### Full name of responsible person

Dr. Farhad Faridhoseini

##### Street address

Hejazi psychiatric hospital, after Majlesi crossroad, Mashhad, Ebadi Avenue

##### City

Mashhad

##### Province

Razavi Khorasan

##### Postal code

919583134

##### Phone

+98 51 3732 6767

##### Email

faridhoseinif@mums.ac.ir

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Mashhad University of Medical Sciences

##### Full name of responsible person

Dr. Mohsen Tafaghodi

##### Street address

Central Building of Mashhad University of Medical Sciences (Ghorshi), Daneshgah 16, Daneshgah street

##### City

Mashhad

##### Province

Razavi Khorasan

##### Postal code

9177899191

##### Phone

+98 51 3841 2081

##### Email

ramresearch@mums.ac.ir

#### Grant name

#### Grant code / Reference number

#### Is the source of funding the same sponsor

**organization/entity?**

Yes

**Title of funding source**

Mashhad 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**

Mashhad University of Medical Sciences

**Full name of responsible person**

Bahareh Hakimi

**Position**

Resident

**Latest degree**

Medical doctor

**Other areas of specialty/work**

Psychiatrics

**Street address**

Ebn-e-sina hospital. Hore Ameli blv.

**City**

Mashhad

**Province**

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**Postal code**

8313491959

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**Fax****Email**

Hakimib971@mums.ac.ir

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

Mashhad University of Medical Sciences

**Full name of responsible person**

Dr Farhad Faridhoseini

**Position**

Assistant Pofessor

**Latest degree**

Specialist

**Other areas of specialty/work**

Psychiatrics

**Street address**

Ibn-e-Sina Hospital, Hore Ameli blv.

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**Province**

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**Postal code**

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**Phone**

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**Fax****Email**

faridhoseinif@mums.ac.ir

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

Mashhad University of Medical Sciences

**Full name of responsible person**

Dr Farhad Faridhoseini

**Position**

Assistant Pofessor

**Latest degree**

Specialist

**Other areas of specialty/work**

Psychiatrics

**Street address**

Ibn-e-Sina Hospital, Hore Ameli blv.

**City**

Mashhad

**Province**

Razavi Khorasan

**Postal code**

8313491959

**Phone**

+98 51 3711 2721

**Fax****Email**

faridhoseinif@mums.ac.ir

**Web page address****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**

Not applicable

**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**

Not applicable