

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

27 Jun 2026

### The effect of perceptual motor exercises on motor perceptual function, dexterity and drawing skills of children with down syndrome

#### Protocol summary

##### Summary

Impaired motor perceptual skills in children with Down syndrome are common deficiency. Given the importance of motor perceptual skills in controlling the environment, participation, learning and performance of these children as activities which are done at school, home and in community, this study will investigate the impact of motor perceptual on motor perceptual function and drawing skills and dexterity in children with Down syndrome. In this survey, using a simple non-probability sampling, the sample size formulas and the laws of the Single System Design Study was considered approximately 5 children. Inclusion criteria include Educable Down Syndrome children with conform diagnosis by clinical psychologist, Educable Down Syndrome children without significant skeletal, neurological and mental illness and the age group is between 4.5 and 14.5 years. Exclusion criteria include non-cooperative child, Child injury accident in the length of treatment and Absence more than one session. They will be examined twice a week with 3 days interval. After further evaluation of the stability-oriented evaluations, along with the investigations, the Subjects treated for 1.5 months (3 times a week, an hour each session). The interventions include motor perceptual and visual perception exercise. Assessments continue twice a week. After completion of the study and statistical analyze, the effect of treatment on motor perceptual skills is examine. This study is single blind.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2013040510387N3**

Registration date: **2013-06-03, 1392/03/13**

Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2013-06-03, 1392/03/13

##### Registrant information

###### Name

Shahla Rafiee

###### Name of organization / entity

Tehran University Rehabilitation College

###### Country

Iran (Islamic Republic of)

###### Phone

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##### Recruitment status

###### Recruitment complete

##### Funding source

Vice chancellor for research, Tehran University of Medical Sciences, 4th Floor, Tehran University Central Building, Keshavarz Blvd, Tehran, Iran.

##### Expected recruitment start date

2012-11-21, 1391/09/01

##### Expected recruitment end date

2013-03-20, 1391/12/30

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

The effect of perceptual motor exercises on motor perceptual function, dexterity and drawing skills of children with down syndrome

##### Public title

The effect of motor perceptual exercises on children with

down syndrome

### **Purpose**

Health service research

### **Inclusion/Exclusion criteria**

Inclusion criteria: - Educable Down Syndrome children with conform diagnosis by clinical psychologist - Educable Down Syndrome children without significant skeletal, neurological and mental illness, significant attention deficit disorder, epilepsy and other disease such as musculoskeletal and neurological disease and fractures and so on. - The age group is between 4.5 and 14.5 Exclusion criteria: - non-cooperative child - Child injury accident in the length of treatment - Absence more than one session

### **Age**

From **5 years** old to **14 years** old

### **Gender**

Male

### **Phase**

N/A

### **Groups that have been masked**

*No information*

### **Sample size**

Target sample size: **5**

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

N/A

### **Randomization description**

### **Blinding (investigator's opinion)**

Single blinded

### **Blinding description**

### **Placebo**

Not used

### **Assignment**

Single

### **Other design features**

This survey is a blind test and examiners are unaware about study process.

## **Secondary Ids**

empty

## **Ethics committees**

### 1

#### **Ethics committee**

##### **Name of ethics committee**

Ethics Committee, Tehran University of Medical Sciences

##### **Street address**

4th Floor, Tehran University of Medical Sciences  
Central Building, Keshavarz Blvd

##### **City**

Tehran

##### **Postal code**

1545913487

##### **Approval date**

2013-01-01, 1391/10/12

##### **Ethics committee reference number**

18882

## **Health conditions studied**

### 1

#### **Description of health condition studied**

Mental Retarded, Down Syndrome

#### **ICD-10 code**

F70

#### **ICD-10 code description**

Approximate IQ range of 50 to 69 (in adults, mental age from 9 to 12 years). Likely to result in some learning difficulties in school. Many adults will be able to work and maintain good social relationships and contribute to society.

## **Primary outcomes**

### 1

#### **Description**

Motor perceptual skills

#### **Timepoint**

Before and after intervention

#### **Method of measurement**

Bruininks RH. Bruininks \_Oseretsky Test

## **Secondary outcomes**

### 1

#### **Description**

Dexterity of upper limb

#### **Timepoint**

Before and after intervention

#### **Method of measurement**

Purdue peg board Test

### 2

#### **Description**

Drawing skills

#### **Timepoint**

Before and after intervention

#### **Method of measurement**

Slowsen's test

## **Intervention groups**

### 1

#### **Description**

The intervention included perceptual motor (Balance, gross, fine and coordination movement exercise) and visual perception exercise. These exercises are designed from easy to hard. Subjects for 1.5 month, 3 sessions per week for 60-minute exercises; balance training (15 minutes), gross motor (15 minutes), fine (15 minutes) and movement coordination (15 minutes) are taught.

#### **Category**

Rehabilitation

## Recruitment centers

1

### Recruitment center

**Name of recruitment center**  
Ghods Special School  
**Full name of responsible person**  
Ghamari Narges  
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No

## Sponsors / Funding sources

1

### Sponsor

**Name of organization / entity**  
Vice chancellor for research, Tehran University of  
Medical Sciences  
**Full name of responsible person**  
Dr Fotouhi  
**Street address**  
4th Floor, Tehran University Central Building,  
Keshavarz Blvd  
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**Grant name**  
-  
**Grant code / Reference number**  
-  
**Is the source of funding the same sponsor  
organization/entity?**  
Yes  
**Title of funding source**  
Vice chancellor for research, 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**  
Education and Training  
**Full name of responsible person**  
Ghamari Narges  
**Position**  
Occupational Therapist/Occupational Therapy  
**Other areas of specialty/work**  
**Street address**

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Rehabilitation Faculty, Tehran University of Medical  
Sciences  
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Master of Health Education  
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## Person responsible for updating data

### Contact

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## 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*