

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

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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
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice chancellor for research, Tehran University of
Medical Sciences
Full name of responsible person
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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
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Person responsible for updating data

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Web page address

No

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