

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

The effect of motor-perception intervention in occupational therapy on motor perceptual function, drawing skills and dexterity of children with mental retardation

Protocol summary

Summary

The process of writing needs a complex coordination of cognitive, perceptual and motor skills. Handwriting is a part of the everyday life of a school child. Skills needed for writing, include the growth of the small muscles of the hand, eye-hand coordination, the ability to keep writing tools and graphic skills. These skills are prerequisite for perceptual motor skills. Perceptual motor skills have major role in learning process. So, in this study, the effect of perceptual motor interventions on perceptual motor function of drawing skills and dexterity is investigated in mentally retarded children. Inclusion criteria include Educable Down Syndrome children with conform diagnosis by clinical psychologist, 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 and Absence more than one session. In this study, using a simple non-probability sampling method and the sample size formula were considered 10 children in the treatment group and 10 children in the control group. Treatment group for 10 weeks, 3 sessions per week for one- hour exercises; motor perceptual and visual perception exercise are taught. Control group are received General education school. All the subjects will be tested. Then, they will be treated occupational therapy for ten weeks. After 10 weeks, all the subjects will be retested. After statistical analysis, the effectiveness of treatment on motor perceptual function will be investigated. This study is single blind.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013040510387N2**
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)

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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

2013-02-19, 1391/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of motor-perception intervention in

occupational therapy on motor perceptual function, drawing skills and dexterity of children with mental retardation

Public title

The effect of motor-perception intervention on motor perceptual function, drawing skills and dexterity

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria: - Educable Mental Retarded children with conform diagnosis by clinical psychologist - Educable Mental Retarded 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: **20**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Other

Other design features

In this study, simple random sampling was used to determine the intervention and control groups. Study is a blind test and Examiners of whether a student belongs to the control group or the intervention group are unaware.

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

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Tehran

Postal code

1545913487

Approval date

2012-11-13, 1391/08/23

Ethics committee reference number

18880

Health conditions studied

1

Description of health condition studied

Mental Retardation

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

Intervention group: The intervention included motor perceptual and visual perception exercise. These

exercises are designed from easy to hard. Subjects for 10 weeks, 3 sessions per week for one hour, are taught with balance, gross motor, fine motor, coordinate movement and visual perception exercises.

Category

Rehabilitation

2

Description

Control group: The intervention included General education school (Working with paint, collage, play dough and playing with the children).

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Ghods Special School

Full name of responsible person

Ghamari Narges

Street address

Shaghayegh Alley, Shahbodaghiyan Street

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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

Dr Fotouhi

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4th Floor, Tehran University Central Building, Keshavarz Blvd

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Tehran

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

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Person responsible for scientific inquiries

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Person responsible for updating data

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Other areas of specialty/work**Street address**

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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*