Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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)

Phone

+98 21 2222 8051

Email address

sh_rafiee@farabi.tums.ac.ir

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
City
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

City

Ghods

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

City

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

Street address

Shaghayegh Alley, Shahbodaghiyan Street

City

Ghods

Postal code

3751113885

Phone

+98 21 4688 5900

Fax

+98 21 4681 6374

Email

Nargesghamari@yahoo.com

Web page address

No

Person responsible for scientific inquiries

Contact

Name of organization / entity

Rehabilitation Faculty, Tehran University of Medical Sciences

Full name of responsible person

Rafiee Shahla

Position

Master of Health Education

Other areas of specialty/work

Street address

Shahnazari Street, Mirdamad Blvd.

City

Tehran

Postal code

1545913487

Phone

+98 21 2222 7124

Fax

+98 21 2222 0946

Email

Sh_rafiee@farabi.tums.ac.ir

Web page address

No

Person responsible for updating data

Contact

Name of organization / entity

Rehabilitation Faculty, Tehran University of Medical

Full name of responsible person
Rafiee Shahla
Position
Mentor-Master of Sciences
Other areas of specialty/work
Street address
Shahnazari Street, Mirdamad Blvd.
City
Tehran
Postal code
1545913487
Phone
+98 21 2222 7124
Fax
+98 21 2222 0946
Email
Sh_rafiee@farabi.tums.ac.ir
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