Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Investigation of effectiveness of Neuropsychological interventions for improving academic performance of children with mathematics learning disabilities

Protocol summary

Summary

Objective: A variety of neuropsychological processes are impaired in children with mathematical learning disabilities , including Attention, Executive Functions, working memory, Visuospatial Processing and other child attributes. The aim of the current research was to investigate the efficacy of neuropsychological interventions for improving academic performance of children with mathematical learning disabilities. Method: The statistical population of the research is the boy student population with mathematical learning disabilities in their primary- school period in city of Isfahan in the school year of 2009-2010. For this purpose, 30 3rd grade elementary students with math learning disabilities were selected using multistage random cluster sampling (each group consist of 15 children). The instrument of this research included neuropsychological test of NEPSY, Wechsler Intelligence Scale for Children (WISC), Keymath test, math academic performance test and Clinical Interview. The design was experimental and neuropsychological interventions (included: improvements in Attention, Executive Functions, working memory, and Visuospatial Processing) was performed in experimental group. Data was analyzed by analysis of Covariance.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138905134510N1**
Registration date: **2010-09-09, 1389/06/18**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2010-09-09, 1389/06/18

Registrant information

Name
Ahmad Abedi
Name of organization / entity
University of Isfahan
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Recruitment status

Recruitment complete

Funding source

researcher

Expected recruitment start date

2009-12-22, 1388/10/01

Expected recruitment end date

2010-02-20, 1388/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Investigation of effectiveness of Neuropsychological interventions for improving academic performance of children with mathematics learning disabilities

Public title

Effectiveness of Neuropsychological interventions for improving academic performance

Purpose

Treatment

Inclusion/Exclusion criteria
Having normal intelligence
Age
No age limit
Gender
Male

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **30**
Randomization (investigator's opinion)
Randomized
Randomization description
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
Isfahan Education Organization - District 3
Street address
Isfahan Education Organization, District 3- next to the Sadi high school - Hakim nezami Ave.
City
Isfahan
Postal code
Approval date
2009-10-27, 1388/08/05
Ethics committee reference number
4790

Health conditions studied

1

Description of health condition studied
mathematics learning disabilities
ICD-10 code
F81.9
ICD-10 code description
Developmental disorder of scholastic skills, unspecified

Primary outcomes

1

Description
academic performance
Timepoint
pre test - post test
Method of measurement
Neuropsychological test of NEPSY and math academic performance test

Secondary outcomes

empty

Intervention groups

1

Description
The design was experimental and neuropsychological interventions included: 1-Attention improvement: included auditory attention, visual attention, selective and sustaind and attention games. 2-Excecutive functions: included planning and organization, reponse inhibition, block construction, tower construction, self-regulation and moitoring games. 3-Working memory: included auditory memory, visual memory, memory for faces, memory for names, tiv sj dhn'dvd recognition and recall memory games. 4-Language: included: auditory attention, auditoy discriment phological processing, and comprehension of instruction, speeded naming. 5-Visuospatial processing: included: Design coping, block construction, arrows and rout finding.
Category
Treatment - Other

2

Description
For control group: training learning to learning or metacognition skills
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
10 Elementary schools from five districts of Isfahan city
Full name of responsible person
Street address
City
Isfahan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
researcher
Full name of responsible person
Ahmad Abedi
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Faculty of education and psychology, university of Isfahan , University Ave. , Azadi square
City
Isfahan
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
researcher
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
University of Isfahan
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Web page address

Person responsible for updating data

Contact

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