# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

08 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
**Country**
Iran (Islamic Republic of)
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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
**Street address**
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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Ahmad Abedi
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Ph.D of Psychology
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## Person responsible for scientific inquiries

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## 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*