

Clinical Trial Protocol

Iranian Registry of Clinical Trials

21 Jun 2026

Development of a dichotic listening training program and comparison of its effect with and without multi-talker babble on recognition of speech in noise in learning-disabled children

Protocol summary

Summary

This study with aiming to decreasing ear asymmetry and increasing speech in noise recognition ability will be conducted in LD children. Their inclusion criteria will be including abnormal ear asymmetry and weakness in speech in noise recognition. They will be randomly allocated into three groups (n= 10, each): group I(intervention with multi-talker babble noise); goupe II (intervention without multi-talker babble noise); and control group (without intervention). Pre- and post-treatment tests will be PrDDT, PCWT, PCST, PARWIN, FARDIN. Intervention based on binaural integration and separation in multitalker babble noise by using recency effect will be performed in one- hour sessions, 3 times per week for 5 consequent weeks. Auditory memory potentiating practice will be added at the later stage of intervention. Pre- and post- results will be compared among groups.

General information

Acronym

LD= learning disability PRDD= Persian randomized dichotic digit test PCW= Persian competing words

IRCT registration information

IRCT registration number: **IRCT2015100524360N1**

Registration date: **2016-02-06, 1394/11/17**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2016-02-06, 1394/11/17

Registrant information

Name

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Name of organization / entity

Country

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Recruitment status

Recruitment complete

Funding source

Iran University of Medical Sciences

Expected recruitment start date

2015-12-22, 1394/10/01

Expected recruitment end date

2016-12-21, 1395/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Development of a dichotic listening training program and comparison of its effect with and without multi-talker babble on recognition of speech in noise in learning-disabled children

Public title

The effect of dichotic training program in learning-disabled children

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: No hearing loss or middle ear pathologies; good SRT; WRTsnr less than 2 SD of PARWIN; Ear asymmetry more than 2 SD in CST
Exclusion criteria: Patient refusal from study

Age

From **8 years** old to **12 years** old

Gender

Both

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)

Single blinded

Blinding description

Placebo

Not used

Assignment

Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Iran University of Medical Sciences

Street address

Hemmat high way

City

Tehran

Postal code

Approval date

2015-09-22, 1394/06/31

Ethics committee reference number

IR.IUMS.rec.1394.26484

Health conditions studied

1

Description of health condition studied

Learning disability

ICD-10 code

F81.9

ICD-10 code description

Developmental disorder of scholastic skills, unspecified

Primary outcomes

1

Description

speech recognition in noise

Timepoint

before and a week and a month after intervention

Method of measurement

PrDDT, PCWT, PCST, PARWIN, FARDIN

Secondary outcomes

1

Description

Auditory communication improvement

Timepoint

before and a week and a month after intervention

Method of measurement

questionnaire and interviewing teachers and parents

Intervention groups

1

Description

Group I will be intervened by dichotic listening to digits, words and sentences presented to the poorer ear with latency varying from 1000 to 0 ms. From the third week, the intervention continue in the presence of multitalker babble noise . Signal to noise ratio is decreased gradually from +15 dB to +5 dB. In the fourth week, several auditory practices for binaural separation will be considered. In the fifth week, some practices are intended to enhance auditory memory.

Category

Rehabilitation

2

Description

Group II will be intervened by dichotic listening to digits, words and sentences presented to the poorer ear with latency varying from 1000 to 0 ms. In the fourth week, several auditory practices for binaural separation will be considered. In the fifth week, some practices are intended to enhance auditory memory.

Category

Rehabilitation

3

Description

The control group will not receive any intervention and participate in the pre- and post- tests.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

School of Rehabilitation, primary schools in Tehran

Full name of responsible person

Street address

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Iran University of Medical Sciences

Full name of responsible person
deputy of research

Street address
Iran

City
Tehran

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
Iran 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
Iran University of Medical Sciences

Full name of responsible person
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Postal code

Phone
00

Fax

Email

Web page address

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