Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 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

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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
Learining 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
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Person responsible for updating data

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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