

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Survey of the effect of exercise on working memory in 7-10 years cochlear implanted children

Protocol summary

Summary

The objective of this research is to exercise (train) working memory (WM) in children with cochlear implant (CI). The study populations were 7-10 years children with CI in Fars CI center entered the study by convenience sampling. Inclusion criteria are: 1)7-10 years old, 2) received CI device for minimum 1 year 3) monolingual (Persian speakers) 4)no cerebral palsy (CP) or central auditory processing disorders (CAPD) based on their medical record, 5)Normal IQ and exclusion criteria consist of 1)low cooperation 2)no attending minimum 10 sessions. The tasks will be used in this study are Forward Digit Span (FDS) and Backward Digit Span (BDS) from the Persian version of WISC-IV, Non-Word Repetition test (NWR) and sentence repetition test. This research will be conducted in several stages explained for children and their parents. In the first stage, FDS, BDS, NWR and sentence repetition test will be performed by an expert was blinded to the study. Then children will attend a pretraining visit to familiar with the software. At the second stage, for training WM they will follow 16 sessions (at least 10 sessions), each session 45 minutes twice per week. Working memory training software is a Persian computer game compatible with its English version of Cogmed Company. At the end of the 16 sessions, all the initial tasks (FDS, BDS, NWR and sentence repetition test) will be repeated and data will be registered for comparing pre and post training.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015072623348N1**

Registration date: **2016-04-13, 1395/01/25**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-04-13, 1395/01/25

Registrant information

Name

Afsaneh Doosti

Name of organization / entity

Shiraz University of Medical Sciences

Country

Iran (Islamic Republic of)

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+98 71 3627 1551

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for research Shiraz University of Medical Sciences

Expected recruitment start date

2016-01-24, 1394/11/04

Expected recruitment end date

2016-03-17, 1394/12/27

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Survey of the effect of exercise on working memory in 7-10 years cochlear implanted children

Public title

Effect of exercise on memory in cochlear implanted children

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criteria: 7-10 years old who received CI device for minimum 1 year, normal IQ , no central auditory processing disorders (based on audiologist diagnosis), Cooperation, monolingual (Persian), right handedness based on Edinburgh criteria no attitude disorder (hyperactivity, attention deficit) based on medical file. Exclusion criteria: No cooperation (parents or children), do not complete any training sessions

Age

From **7 years** old to **10 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **25**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Shiraz University of Medical Sciences

Street address

Shiraz University of Medical Sciences building, front of Felestin St. Zand St. Shiraz

City

Shiraz

Postal code

Approval date

2016-01-24, 1394/11/04

Ethics committee reference number

IR.SUMS.REC.1394.194

Health conditions studied

1

Description of health condition studied

cochlear implant

ICD-10 code

Z96.2

ICD-10 code description

Presence of audiological implants (functional)

Primary outcomes

1

Description

Digit memory

Timepoint

before and immediately after training session with working memory software (minimum 10 sessions)

Method of measurement

Wechsler Intelligence Scale for Children

Secondary outcomes

1

Description

non-word repetition & sentence repetition

Timepoint

before and immediately after training session with working memory software (minimum 10 sessions)

Method of measurement

non-word repetition test & sentence repetition test

Intervention groups

1

Description

In this study, cochlear implanted child will be trained by Working memory training software is compatible with its English version made by the Cogmed Company. Treatment consists of 16 training sessions (45 minutes).

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Fars cochlear implantation center

Full name of responsible person

Seyed Basir Hashemi (Professor in Otolaryngology and Fellowship in Ear Diseases and Cochlear Implant

Street address

Khalili Hospital, Khalili St. Shiraz

City

Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for research Shiraz University of Medical Sciences

Full name of responsible person

Seyed Basir Hashemi, Vice-Chancellor for Research and Technology Affairs

Street address

Vice chancellor of research, Shiraz University of Medical Sciences, Zand St, Shiraz

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Shiraz

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 Shiraz 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

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Full name of responsible person

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Position

Assistant professor

Other areas of specialty/work

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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