Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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
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Iran (Islamic Republic of)
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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

City
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