

Clinical Trial Protocol

Iranian Registry of Clinical Trials

05 Aug 2026

Effectiveness of Cognitive Computerized Training in Working Memory and Language Skills of Children With Cochlear implant

Protocol summary

Summary

The present research investigates the effectiveness of Computerized Cognitive Training on the Performance Working Memory of children with cochlear implant. A quasi-experimental pretest-posttest design was applied in this research, in which 60 cochlear implant children selected through convenience sampling were randomly divided into control and experimental groups (each containing 30 individuals). The experimental group attended a computerized cognitive training interventional program. Working Memory Test Battery for Children (Pickering & Gathercole, 2001, translated by Arjmandnia, 2009) was used in pretest and posttest in order to evaluate their working memory. Also scale of Categorization of Auditory Performance (CAP) and scale of Speech Intelligibility Rating (SIR) used for assessment of auditory perception and speech intelligibility. The achieved data was analyzed using univariate and multivariate covariance test.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015121325467N1**

Registration date: **2017-07-20, 1396/04/29**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2017-07-20, 1396/04/29

Registrant information

Name

Ali Sharifi

Name of organization / entity

Allameh Tabataba'i University, Tehran, Iran

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

New Hearing Technology Research Center of Baghiatallah University of Medical Sciences

Expected recruitment start date

2017-02-08, 1395/11/20

Expected recruitment end date

2017-08-22, 1396/05/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effectiveness of Cognitive Computerized Training in Working Memory and Language Skills of Children With Cochlear implant

Public title

Effectiveness of Cognitive Computerized Training in Working Memory and Language Skills of Children With Cochlear implant

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criteria: Congenital hearing impairment; Age between 6 to 15 years old; Normal intelligence; Cochlear implanted between 1 to 5 years old; Absence of the other disabilities such as: CP, MR, genetically syndromes, blindness Exclusion criteria: Acquired hearing impairment; Abnormal intelligence; Cochlear implanted

above 5 years old
Age
From **6 years** old to **15 years** old
Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **60**

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
Baghiatallah University of Medical Science

Street address
Baghiatallah University of Medical Science , Vanak Sq,
Molasadra St, Tehran. Iran

City
Tehran

Postal code
1435916471

Approval date
2016-08-01, 1395/05/11

Ethics committee reference number
IR.BMSUREC.1395.62

Health conditions studied

1

Description of health condition studied
Children with Haring Impairment

ICD-10 code
H90.5

ICD-10 code description
Sensorineural hearing loss, unspecified

Primary outcomes

1

Description
Working Memory

Timepoint
After and before intervention

Method of measurement
Working Memory Test Battery for Children (WMBT-C)

2

Description
Auditory performance

Timepoint
before and after intervantion

Method of measurement
scale of Categorization of Auditory Performance (CAP)

3

Description
speech intelligibility

Timepoint
before and after intervantion

Method of measurement
scale of Speech Intelligibility Rating (SIR)

4

Description
Added at 2017-11-05: language skills

Timepoint
Added at 2017-11-05: Before and after intervention

Method of measurement
Added at 2017-11-05: Test of Language Development

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Computerized cognitive training will be executed on the experimental group in 20 sessions for 3-4 months. Trainer will educate children by computerized cognitive program focusing on cognitive abilities and some of items and parts will be rehearsed by mother at home.

Category
Rehabilitation

2

Description
Control group: No intervention will be made for control group in this study.

Category
N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Hearing Cochlear Implant Center of Baqyatallah Hospital

Full name of responsible person

Amir Hosein Maghari

Street address

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

New Hearing Technology Research Center of Baghyatallah University of Medical Sciences

Full name of responsible person

Susan Amirsalari

Street address

Hearing Cochlear Implantation Center, Sheikhabahaei St, Molasadra St, Vanak Sq, Tehran, Iran

City

Tehran

Grant name

Grant code / Reference number

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

Yes

Title of funding source

New Hearing Technology Research Center of Baghyatallah 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

Baqyatallah University

Full name of responsible person

Ali Sharifi

Position

PhD Student of Psychology and Education of Exceptional Children-

Other areas of specialty/work

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Baqyatallah university of Medical Sciences

Full name of responsible person

Dr. Susan Amirsalari

Position

Faculty Member of Baqyatallah University

Other areas of specialty/work

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Name of organization / entity

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Full name of responsible person

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Position

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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