

Clinical Trial Protocol

Iranian Registry of Clinical Trials

18 Jun 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

+98 917 351 6899

Email address

a.sharifi@ut.ac.ir

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, Sheikhbahaei 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**Street address**

Baqyatallah University, Molasadra st, Shaykhbahaei

ave. Vanak sq, Tehran, Iran

City

Tehran

Postal code**Phone**

+98 936 373 1416

Fax**Email**

a.sharifi6688@gmail.com

Web page address

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**Street address**

Baqiatallah university, Molasadra St, Vanak sq, Tehran, Iran

City

Tehran

Postal code**Phone**

+98 917 351 6899

Fax**Email**

a.sharifi6688@gmail.com

Web page address

Person responsible for updating data

Contact

Name of organization / entity

Allameh Tabatabaie University- Baqiatallay University

Full name of responsible person

Ali Sharifi

Position

PhD Student of Psychology and Education of Exceptional Children

Other areas of specialty/work**Street address**

Baqyatallah University, Molasadra st, Vanak Sq, Tehran, Iran

City

Tehran

Postal code**Phone**

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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