Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Comparing the Effectiveness of Cognitive Rehabilitation Training and Memory and Attention Adaptation Training on Working memory, Attention, Processing Speed and Executive Function in Children Survived from Cancer

Protocol summary

Study aim

The aim of this study was to investigate the effectiveness of two methods of intervention, cognitive rehabilitation and memory and attention adaptation, and compare their effectiveness on working memory, processing speed, attention and executive functions in children Survived from cancer.

Design

Clinical trials have two experimental groups and one control group, with parallel, randomized groups, on 60 subjects. To assign subjects, a random matching method is used. Subjects are individually matched and paired by age and gender. Each of the two was assigned with a number and then with simple random method, one of the numbers assigned to experimental group and the other number assigned to control group.

Settings and conduct

The interventions were performed individually by a child and adolescent psychologist in Ȧban psychological clinic; Located in Shiraz; Fars province.

Participants/Inclusion and exclusion criteria

Inclusion criteria: age between 6 to 16 years old; suffering from Acute lymphoblastic leukemia with the history of chemotherapy; passing at least 2 months from the end of medical treatment; Weakness with at least one standard deviation in research variables; Conscious satisfaction to participate in research. Non-inclusion criteria: suffering from other kinds of cancer; with the history of other kinds of medical treatment.

Intervention groups

This study include 3 groups. First experimental group receive cognitive rehabilitation training. The second experimental group receive memory and attention adaptation training; and the 3th group, as the control group, do not receive any intervention during the study.

Main outcome variables

Scores of memory; attention; processing speed and executive functions.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200516047463N1**
Registration date: **2020-06-14, 1399/03/25**
Registration timing: **prospective**

Last update: **2020-06-14, 1399/03/25**
Update count: **0**

Registration date

2020-06-14, 1399/03/25

Registrant information

Name

Nafiseh Damreihani

Name of organization / entity

Islamic Azad University

Country

Iran (Islamic Republic of)

Phone

+98 71 3833 4383

Email address

nfsh.reyhani@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-06-21, 1399/04/01

Expected recruitment end date

2020-09-21, 1399/06/31

Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparing the Effectiveness of Cognitive Rehabilitation Training and Memory and Attention Adaptation Training on Working memory, Attention, Processing Speed and Executive Function in Children Survived from Cancer

Public title
Effectiveness of Rehabilitation on Memory in Children Survived from Cancer
Purpose
Supportive
Inclusion/Exclusion criteria
Inclusion criteria:
Age between 6 to 16 years old Having a diagnosis of acute lymphoblastic leukemia With the history of chemotherapy Weakness with at least one standard deviation in research variables Satisfaction with participating in research
Exclusion criteria:
Suffering from other kinds of cancer Using of combined medical treatment methods (chemotherapy along with radiation therapy) Other chronic physical illnesses
Age
From **6 years** old to **16 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
To assign subjects, a random matching method is used. Subjects are personally matched and paired by age and gender. Each of the two was assigned with a number and then with simple random method, one of the numbers assigned to experimental group and the other number assigned to control group.
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
Ethics committe of Islamic Azad University- Shiraz Branch
Street address
No.7, Karen building, 64/1 lane, Pasdaran boulevard
City
Shiraz
Province
Fars
Postal code
718467773
Approval date
2020-05-11, 1399/02/22
Ethics committee reference number
IR.IAU.SHIRAZ.REC.1399.002

Health conditions studied

1

Description of health condition studied
Acute lymphoblastic leukemia with a history of chemotherapy
ICD-10 code
C91.0
ICD-10 code description
Acute lymphoblastic leukemia [ALL]

Primary outcomes

1

Description
Score of working memory in Wechsler Intelligence Scale for Children- Fourth Edition
Timepoint
Before the intervention, after the intervention, 2 months after the end of the intervention
Method of measurement
Wechsler Intelligence Scale for Children- Fourth Edition

2

Description
Score of processing speed in Wechsler Intelligence Scale for Children- Fourth Edition
Timepoint
Before the intervention, after the intervention, 2 months after the end of the intervention
Method of measurement
Wechsler Intelligence Scale for Children- Fourth Edition

3

Description
Score of attention in Stroop test
Timepoint

Before the intervention, after the intervention, 2 months after the end of the intervention

Method of measurement

Stroop test

4

Description

Score of executive functions in Behavior Rating Inventory of Executive Function

Timepoint

Before the intervention, after the intervention, 2 months after the end of the intervention

Method of measurement

Behavior Rating Inventory of Executive Function

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: first group, Cognitive Rehabilitation Training, This training method includes 12 50-minute sessions that are held once a week. The first 20 minutes of the session are devoted to practical cognitive rehabilitation exercises. Exercises such as: time-reducing techniques, content memorization techniques, increasing the field of view using the card, measuring reading speed, visual memory exercises using the card, finding differences and similarities in images with time recording, Memory games such as recalling spoken words or naming objects seen in the picture, auditory memory exercises, etc. Then in the last 30 minutes of the session, the subject will use memory and concentration software to perform visual and auditory memory exercises. In this research, the Persian version of Cogmed software will be used. During each session, the subject should first perform forward visual and auditory exercises and then reverse visual and auditory exercises.

Category

Rehabilitation

2

Description

Intervention group: second group, Memory and Attention Adaptation, This training method includes 4 one-hour face-to-face sessions that are held once every 2 weeks, and 3 phone calls at intervals of each face-to-face session, to follow up on homework and troubleshooting. In the fourth session, relapse prevention methods will be taught to the person and after a few months, a face-to-face session can be requested to review the treatment process. Specific techniques used in this method are drawn from the cognitive-behavior therapy(CBT). Memory and Attention Adaptation Training is organized into four components: (1) education (on chemotherapy related cognitive problems and other influences on attention and memory such as stress); (2) self-awareness training (self-monitoring to identify “at risk” situations or conditions associated with cognitive failure); (3) compensatory cognitive skills training; and (4) applied relaxation training for arousal reduction.

Category

Rehabilitation

3

Description

Control group: no intervention

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Imam Reza Professional Clinic

Full name of responsible person

Mohammad Reza Bordbar

Street address

Namazi square

City

Shiraz

Province

Fars

Postal code

714737-71348

Phone

+98 71 3212 7000

Email

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

Sareh Behzadipour

Street address

No.7, Karen building, 64/1 lane, Pasdaran boulevard

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Shiraz

Province

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718497773

Phone

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nfsh.reyhani@gmail.com

Grant name

Grant code / Reference number

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

No

Title of funding source

Islamic Azad University

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Islamic Azad University

Full name of responsible person

Nafiseh Damreihani

Position

Student

Latest degree

Master

Other areas of specialty/work

Psychology

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Full name of responsible person

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Latest degree

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Other areas of specialty/work

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Person responsible for updating data

Contact

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Full name of responsible person

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

Questionnaires completed in the pre-test, post-test and follow-up stages can be provided

When the data will become available and for how long

access period after printing the results

To whom data/document is available

Researchers

Under which criteria data/document could be used

In order to verify the results

From where data/document is obtainable

nfsh.reyhani@gmail.com

What processes are involved for a request to access data/document

The proposal of the research project should be sent along with the request for access to the data

Comments