

Clinical Trial Protocol

Iranian Registry of Clinical Trials

02 Jul 2026

Comparison of resistance and concurrent training on physiological variables of intellectually disabled children with overweight

Protocol summary

Study aim

Compare the effect of 12 weeks of resistance and combination exercise on some physiological variables in intellectually disabled children with overweight

Design

This research was an applied semi-experimental type and was performed in terms of data collection by field method with pre and post test measurement design. The statistical sample of the study consisted of 24 children of mentally retarded people of Isfahan city and it was done randomly and in parallel without blindness.

Settings and conduct

24 mentally retarded children were randomly divided into two groups of resistance and combination exercise. The training groups were active for 12 weeks, 3 sessions per week and 45 minutes per session.

Participants/Inclusion and exclusion criteria

Inclusion criteria: No other disease(cardiovascular disease); Non-placement in drug treatment courses; Training mental retardation with IQ Score of 35 to 50 and body mass index of 25 to 35; Male and female sex age 8 to 11 years. Exclusion criteria: Children without educable mental disabilities; Less than 8 years and above 11 years; History of cardiovascular disease.

Intervention groups

Intervention Group 1: The 12 person group performed the strength training protocol. Intervention Group 2: A group of 12 people performed a combined exercise (resistance: aerobic) protocol.

Main outcome variables

Aerobic capacity, body fat percentage, muscle strength an endurance, dynamic balance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200326046861N1**

Registration date: **2020-05-02, 1399/02/13**

Registration timing: **retrospective**

Last update: **2021-10-24, 1400/08/02**

Update count: **1**

Registration date

2020-05-02, 1399/02/13

Registrant information

Name

Vazgen Minasian

Name of organization / entity

University of Isfahan

Country

Iran (Islamic Republic of)

Phone

+98 31 3627 8066

Email address

v.minasian@spr.ui.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-09-23, 1398/07/01

Expected recruitment end date

2019-12-28, 1398/10/07

Actual recruitment start date

2019-09-23, 1398/07/01

Actual recruitment end date

2019-12-28, 1398/10/07

Trial completion date

2019-12-28, 1398/10/07

Scientific title

Comparison of resistance and concurrent training on physiological variables of intellectually disabled children with overweight

Public title

Comparison of resistance and concurrent training on physiological variables of intellectually disabled children

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Trainable mentally retarded No other disease(cardiovascular disease)

Exclusion criteria:

Medical problems drug use

Age

From **8 years** old to **11 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **24**

Actual sample size reached: **24**

Randomization (investigator's opinion)

Randomized

Randomization description

22 Intellectual disabilities children with overweight who were in our study area were divided into two equal groups of 12 people using a simple random sampling method (resistance training group and combined exercise group). The random sampling was such that the subjects were first ranked based on their body mass index. In the second step is based on ABBA method. First, the person with the highest body mass index was in group A; the second and third person with the highest body mass index was in group B, and the fourth person (fourth rank) was in group A, and continued until the last one to be equal in accordance with the ABBA method.

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 Committee of University of Isfahan

Street address

Azadi Square, Hezar Jarib

City

Esfahan

Province

Isfahan

Postal code

8174673441

Approval date

2019-09-04, 1398/06/13

Ethics committee reference number

IR.UI.REC.1398.035

Health conditions studied

1

Description of health condition studied

of intellectually disabled children with overweight

ICD-10 code

F71

ICD-10 code description

Moderate intellectual disabilities

Primary outcomes

1

Description

Aerobic capacity

Timepoint

Before and 12 weeks after intervention

Method of measurement

20 m sweep test

2

Description

Dynamic balance

Timepoint

Before and 12 weeks after intervention

Method of measurement

Y balance test

3

Description

Body fat percentage

Timepoint

Before and 12 weeks after intervention

Method of measurement

Harbinger calipers

4

Description

Abdominal muscles endurance

Timepoint

Before and 12 weeks after intervention

Method of measurement

The long test of the Eifford meeting for one minute

5

Description

flexibility

Timepoint

Before and 12 weeks after intervention

Method of measurement

Sit and brush test

6**Description**

Trunk Power

Timepoint

Before and 12 weeks after intervention

Method of measurement

Korea-made handheld and multifunction manometers with the mark SEHAN

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention Group 1: A 12-member group of resistance training protocol includes seven movements (step-by-step exercise, step-by-step exercise, squatting, long and sitting exercise, bridge on the ground, forearm dumbbell, dumbbell behind the arm) and up to 12 weeks And 3 days and This was done for 1 hour a week.

Category

Rehabilitation

2**Description**

Intervention Group 2: A 12-person combined exercise protocol group was also performed for 12 weeks and 3 days per week for 1 hour. In the aerobic exercise section, the heart rate was adjusted to 50 to 80 percent of its maximum heart rate. Endurance training included brisk walking or running, and resistance training included strengthening the biceps, triceps, abdominal muscles of the back thigh muscles, and the front thigh muscles.

Category

Rehabilitation

Recruitment centers**1****Recruitment center****Name of recruitment center**

Saadat Rehabilitation

Full name of responsible person

Saadat Anbarzadeh

Street address

Number 138, Saadat, Jami, Panj ramazan

City

Esfahan

Province

Isfahan

Postal code

8195633361

Phone

+98 31 3338 6109

Fax**Email**

farzaneh72mn@gmail.com

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

University of Esfahan

Full name of responsible person

Dr. Rasoul Roknizadeh

Street address

College of Physical Education, University of Esfahan, Hezar Jarib, Azadi Square

City

Esfahan

Province

Isfahan

Postal code

8195633361

Phone

+98 31 3793 4245

Email

v.minasian@spr.ui.ac.ir

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

No

Title of funding source

Dr. Rasoul Roknizadeh

Proportion provided by this source

100

Public or private sector

Private

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**

University of Esfahan

Full name of responsible person

Farzaneh mardanian

Position

Instructor of Isfahan University

Latest degree

Master

Other areas of specialty/work

Instructor of Isfahan University

Street address

Azadi square, Hezarjarib

City
Esfahan
Province
Isfahan
Postal code
8195633361
Phone
009837934244
Email
farzaneh72mn@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity
University of Esfahan
Full name of responsible person
Dr. Vazgen Minasyan
Position
Associate Professor
Latest degree
Ph.D.
Other areas of specialty/work
Physiology
Street address
Azadi square, Hezar jarib
City
Esfahan
Province
Isfahan
Postal code
8195633361
Phone
+98 31 3793 4244
Email
v.minasian@spr.ui.ac.ir

Person responsible for updating data

Contact

Name of organization / entity
University of esfahan
Full name of responsible person
Farzaneh mardanian
Position
Instructor
Latest degree
Master
Other areas of specialty/work
Instructor of Isfahan university
Street address
Azadi square, hezar jarib
City
Esfahan
Province
Isfahan
Postal code
۸۱۹۵۶۳۳۳۶۱
Phone
+98 31 3793 4244
Email
farzaneh72mn@gmail.com

Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

Because my information is personal

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available