Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 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

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Name of organization / entity
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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 disabillies children with overweight who were in our study area were divided into two equal groups of 12 peopel using a simple random sampling wethod(resistance training group and combined exercise group). the random sampling was such that the subjects were first ranked based on their body was 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

Isfehan

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
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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College of Physical Education, University of Esfahan, Hezar Jarib, Azadi Square
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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
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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