

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of the effect of motor and virtual games on motor, educational and social performance in children with developmental coordination disorder

Protocol summary

Study aim

The aim of current study is Comparison of the effect of motor and virtual games on motor, educational and social performance in children with developmental coordination disorder.

Design

A controlled, parallel-group, unblinded, simple randomized clinical trial of 30 children.

Settings and conduct

The present research is conducted in Ardabil city. After completing the written consent form, the pre-test of motor, academic and social performance is taken from the children. motor game and virtual game groups are subjected to intervention for 8 weeks, 2 sessions per week. For the control group, no intervention is applied in these 8 weeks. Then, the post-test of the mentioned variables is taken.

Participants/Inclusion and exclusion criteria

Boys from 7 to 10 years old The score of individuals in the Motor Observation Questionnaire for Teachers (PMOQ-T) should be below the 16th percentile Not having severe cognitive, skeletal and muscular neurological problems, vestibular system as diagnosed by a doctor and a physiotherapist

Intervention groups

Virtual gaming group: This group takes place for 16 sessions (2 monthly and 2 weekly sessions) and each session lasts 60 minutes under the Wii Fit game protocol. Movement game group: This group receives perceptual-motor games for 16 sessions (2 monthly and 2 weekly sessions) and each session is 60 minutes. Control group: no intervention is applied to the control group in these 8 weeks.

Main outcome variables

Motor performance Academic Performance Social Performance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20220723055531N1**

Registration date: **2022-08-30, 1401/06/08**

Registration timing: **prospective**

Last update: **2022-08-30, 1401/06/08**

Update count: **0**

Registration date

2022-08-30, 1401/06/08

Registrant information

Name

sina malekzadeh

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 11 3303 2891

Email address

sina.malekzadeh8@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-10-14, 1401/07/22

Expected recruitment end date

2022-12-13, 1401/09/22

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the effect of motor and virtual games on motor, educational and social performance in children with developmental coordination disorder

Public title

Comparison of the effect of motor and virtual games on motor, educational and social performance in children with developmental coordination disorder

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Boys from 7 to 10 years old The score of individuals in the Motor Observation Questionnaire for Teachers (PMOQ-T) should be below the 16th percentile. Having physical and mental health by referring to the individual's health record at school

Exclusion criteria:

Age

From **7 years** old to **10 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

Simple randomization People are placed in the intervention or control group by flipping a coin.

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

Research ethics committee of Islamic Azad University-Sari branch

Street address

13th floor, block A, Treatment and Medical Education headquarters, Ministry of Health, Simai Iran St., between South Falamak and Zarafshan, Quds settlement (west) .

City

tehran

Province

Tehran

Postal code

1439951154

Approval date

2022-07-19, 1401/04/28

Ethics committee reference number

IR.IAU.SARI.REC.1401.070

Health conditions studied

1

Description of health condition studied

developmental coordination disorder

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Motor performance

Timepoint

Before and after the intervention

Method of measurement

Movement Assessment Battery for Children (MABC-2)

2

Description

Academic performance

Timepoint

Before and after the intervention

Method of measurement

Academic Performance Rating Scale (APRS)

3

Description

Social performance

Timepoint

Before and after the intervention

Method of measurement

Social Skills Assessment Test (Parent Version) by Gresham and Elliott

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: virtual game: This group is for 16 sessions (2 monthly and 2 weekly sessions) and each session is 60 minutes in an equipped environment and they are cheerfully and under the supervision of a medical expert in order to prevent the subjects from

getting injured under the Wii-Fit game protocol. The first 15 minutes consists of warm-up, followed by 20 minutes of play involving transfer motor skills (stepping, jogging, hurdle running, skateboarding) and then 15 minutes of play involving manipulative motor skills (mini baseball, mini bowling, mini football and golf) and at the end there is a 10-minute cooling down.

Category

Other

2**Description**

Intervention group: motor game: This group has 16 sessions (2 monthly and 2 weekly sessions) and each session lasts 60 minutes in a well-equipped environment and they undergo perceptual-motor games cheerfully and under the supervision of a medical expert in order to prevent the subjects from getting injured.

Category

Other

3**Description**

Control group: Control group: For the control group, no intervention is applied in these 8 weeks.

Category

Other

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

General Department of Education of Ardabil Province

Full name of responsible person

Tarahem Rostami

Street address

General Department of Education of Ardabil Province, Bakeri Square, Ardabil city.

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

Islamic Azad University

Full name of responsible person

Leyla Zamani

Street address

Islamic Azad University- Sari branch, km 7 of Darya Road (Farahabad), Sari, Khazar Square.

City

sari

Province

Mazandaran

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

Yes

Title of funding source

Islamic Azad University

Proportion provided by this source

50

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

Leyla Zamani

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

motor behavior

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Person responsible for scientific

inquiries

Contact

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Full name of responsible person

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Other areas of specialty/work

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Person responsible for updating data

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Master of science

Latest degree

Master

Other areas of specialty/work

Motor development

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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

There is no further information.

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