Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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 fliping 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

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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 Zameni

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

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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 Zameni

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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Position
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Master of science

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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