

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Impact of Active Video Games (Xbox Kinect) on Static and Dynamic Balance in Children with Autism Spectrum Disorder

#### Protocol summary

##### Study aim

The effect of active video games on static and dynamic balance in autistic children

##### Design

The present study has a control group, a randomized, blinded strain. Includes an active video game group and a control group.

##### Settings and conduct

After selecting the case study, the static balance pre-test will be performed using modified stork test and dynamic balance test using the heel toe test. Subjects were given an intervention for 8 weeks after being placed in their groups. A multi functional room will be used for the intervention. Xbox Games Kinect is a new technology that creates an interactive environment to execute individual movements on the screen. Children will stand in front of the device and try to imitate the character's movements on the screen. Individuals will be individually intervened and the control group will not use Xbox Kinect games.

##### Participants/Inclusion and exclusion criteria

Age range; no visual impairment, orthopedic and cardiovascular disease, family satisfaction with conditions. Over 3 sessions of absenteeism during the intervention process, having comorbidities such as severe sensory-motor disorders will be excluded.

##### Intervention groups

After the pre-test, the subjects will be randomly divided into 2 groups of active and control video games and will run for 8 weeks, 2 sessions per week for a total of 16 sessions. The time is 45 minutes per minute and will be divided into 4 sections. The first 15 minutes consist of warm-up, the last 20 minutes of playing selected Xbox Kinect games, and the last 10 minutes include cooling off. The intervention group active video games, including track and field and bowling will run. The control group will have no exercise other than autism center daily programs.

##### Main outcome variables

Because Xbox Kinect games are fun for autistic children, their participation in these activities can improve their physical, behavioral, and physical problems.

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20191009045039N1**

Registration date: **2019-10-21, 1398/07/29**

Registration timing: **registered\_while\_recruiting**

Last update: **2019-10-21, 1398/07/29**

Update count: **0**

##### Registration date

2019-10-21, 1398/07/29

##### Registrant information

##### Name

Neda Ghobadi

##### Name of organization / entity

Education

##### Country

Iran (Islamic Republic of)

##### Phone

+98 11 4201 1632

##### Email address

nedaghobadikhu@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2019-10-14, 1398/07/22

##### Expected recruitment end date

2020-01-15, 1398/10/25

##### Actual recruitment start date

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

Impact of Active Video Games (Xbox Kinect) on Static and Dynamic Balance in Children with Autism Spectrum Disorder

**Public title**

The Impact of Xbox Kinect Games on the Static and Dynamic Balance of Autism Children

**Purpose**

Health service research

**Inclusion/Exclusion criteria****Inclusion criteria:**

No visual impairment No orthopedic problems No cardiovascular problems

**Exclusion criteria:**

There are up to 3 times absence during the intervention Existence of obvious abnormalities Vestibular system disorder and body sensations

**Age**

From **4 years** old to **12 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

- Participant

**Sample size**

Target sample size: **16**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

The statistical population of autistic children is Sari. The sampling method will be made available. Subjects will be randomly divided into experimental and control groups after the pre-test.

**Blinding (investigator's opinion)**

Single blinded

**Blinding description**

The present study is a single blinded one and the participants who will be divided into two intervention and control groups will be unaware of the type of intervention.

**Placebo**

Not used

**Assignment**

Parallel

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Ethics committee of Tarbiat Modares

**Street address**

AL Ahmad Ave., Nasr Bridge

**City**

Tehran

**Province**

Tehran

**Postal code**

14115-111

**Approval date**

2019-05-25, 1398/03/04

**Ethics committee reference number**

IR.MODARES.REC.1398.051

**Health conditions studied****1****Description of health condition studied**

Autism Neural Developmental Disorder

**ICD-10 code****ICD-10 code description****Primary outcomes****1****Description**

Static and dynamic balance score

**Timepoint**

The static and dynamic balance measurement sessions were active at baseline (before intervention) and after 16 sessions of video game exercises.

**Method of measurement**

How to measure static balance is a Modified Stork Test. How to measure dynamic balance is a Walking heel to Toe Test.

**Secondary outcomes**

empty

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

Intervention group: Use Xbox Kinect games for 16 sessions.

**Category**

Rehabilitation

**Recruitment centers****1****Recruitment center**

Name of recruitment center

Nik Andishan Autism Home

**Full name of responsible person**

Ebrahimi Sediqe

**Street address**

Moalem Ave., Moalem 6., Mellat Bank Alley; No. 67

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**Province**

Mazandaran

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**Email**

dr.ebrahimi@gmail.com

## Sponsors / Funding sources

### 1

**Sponsor**

**Name of organization / entity**

The University of kharazmi

**Full name of responsible person**

Farhad Ghadiri

**Street address**

End of Mirdamad, End of South Razan Ave, Shahid Keshvari Complex, School of Physical Education and Sport Sciences

**City**

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**Province**

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15447-33111

**Phone**

+98 21 2222 8001

**Email**

nedaghobadikhu@gmail.com

**Grant name**

**Grant code / Reference number**

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

Yes

**Title of funding source**

The University of kharazmi

**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**

Education

**Full name of responsible person**

Neda Ghobadi

**Position**

Teacher

**Latest degree**

Master

**Other areas of specialty/work**

Pediatrics

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## Person responsible for updating data

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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**

Not applicable

**Analytic Code**

Not applicable

**Data Dictionary**

Not applicable

**Title and more details about the data/document**

All data will be shared after unidentifiable people.

**When the data will become available and for how long**

The period for accessing the data will be 6 months after the results are published.

**To whom data/document is available**

Data will be available only to researchers working in academic and research institutions.

**Under which criteria data/document could be used**

Researchers can use the documentation for their research.

**From where data/document is obtainable**

E-mail nedaghobadikhu@gmail.com will be responsible for receiving the documentation.

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

Within 2 weeks after the request has been submitted, the applicant can access the files. محقق

**Comments**