Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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)

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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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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

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15447-33111

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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
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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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.محقم
Comments