

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

12 Jun 2026

### Predictive Control of Movement in High Functioning Autism Spectrum Disorder Children: Combine Approach for Motor Skills Learning

#### Protocol summary

##### Study aim

Evaluation of predictive control of movement in children aged 8 to 13 years old with high functioning autism spectrum disorder and the effectiveness of motor imagery training on motor skills learning

##### Design

Clinical trial with a control group based on community with a parallel group

##### Settings and conduct

After the selection and entry of the participants in the private center for rehabilitation of autism, pre-intervention tests are carried out using penalty of basketball and movement assessment battery for children and training present at the center particularly. After 5 sessions of training then tests such as pre-test conditions at the Same center are done.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: A) All are right hands B) don't have skeletal- muscular injuries C) range of age between 8 to 13 years D) sex: male E) Do not have a history of engagement in protocols of motor imagery training F) Have a specific schedule for sleeping and eating G) Based on DSM-V criteria, autism spectrum disorder has been identified for these children. Exclusion criteria: A) another disorder, such as epilepsy, cerebral palsy or Down syndrome, and all kinds of mental retardation have been diagnosed For them B) Have a history of basketball practice C) Have a history of admission to mental hospitals D) Have a history of using psychoactive drugs

##### Intervention groups

Control group: The children of this experimental group are engaged in their common occupational therapeutic and psychological interventions. Intervention group: Children will take part in motor imagery training that will be delivered in 5 sessions per hour In addition common occupational therapeutic and psychological interventions.

##### Main outcome variables

dynamic and static balance, aiming and catching, hand

dexterity

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20181211041929N1**

Registration date: **2019-01-30, 1397/11/10**

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

Last update: **2019-01-30, 1397/11/10**

Update count: **0**

##### Registration date

2019-01-30, 1397/11/10

##### Registrant information

##### Name

Saeid Ahar

##### Name of organization / entity

Kharazmi university of Tehran

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 8835 4734

##### Email address

std\_saeid.ahar@khu.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2019-01-30, 1397/11/10

##### Expected recruitment end date

2019-02-24, 1397/12/05

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**

empty

**Scientific title**

Predictive Control of Movement in High Functioning Autism Spectrum Disorder Children: Combine Approach for Motor Skills Learning

**Public title**

Motor Skills Learning in High Functioning Autism Spectrum Disorder Children

**Purpose**

Supportive

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

All are right hands don't have skeletal- muscular injuries range of age between 8 to 13 years sex: male Do not have a history of engagement in protocols of motor imagery training Have a specific schedule for sleeping and eating Based on DSM-V criteria, autism spectrum disorder has been identified for these children.

**Exclusion criteria:**

another disorder, such as epilepsy, cerebral palsy or Down syndrome, and all kinds of mental retardation have been diagnosed For them Have a history of basketball practice Have a history of admission to mental hospitals Have a history of using psychoactive drugs

**Age**

From **8 years** old to **13 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**

A) Randomization method: Simple randomization (random number table) B) Building Random sequence method: Determining beforehand reading the table (up, down, right, left) then we start reading numbers from 0 to 50 intervention groups and 51 to 99 control groups. C) Randomization unit: Individual D) Randomization Tool: Random number table, sealed envelopes (for making random sequences) E) Concealment: Snose method A number of aluminum-covered envelopes (in order to keep the contents of the envelopes unclear) are prepared and each random sequence created on the card is recorded and the cards are inserted into the envelopes respectively. In order to maintain a random sequence, the numbering of the envelopes on the outer surface is done in the same order. Finally, the flap is closed in pockets and placed in the box, respectively. At the time of registration of the participants, according to the order in which the participants are entered, one of the envelopes is opened and the allocated group of that participant is made known.

**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 on Biomedical Research in Tarbiat Modares University

**Street address**

Jalal AleAhmad Blvd, Nasr bridge, Tehran

**City**

Tehran

**Province**

Tehran

**Postal code**

14115-111

**Approval date**

2018-12-09, 1397/09/18

**Ethics committee reference number**

IR.MODARES.REC.1397.140

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

Autism spectrum disorder

**ICD-10 code**

F84.0

**ICD-10 code description**

Autistic disorder

**Primary outcomes****1****Description**

Static and dynamic balance

**Timepoint**

Before the intervention and the end of the intervention

**Method of measurement**

Movement assessment battery for children

**2****Description**

Hand dexterity

**Timepoint**

Before the intervention and the end of the intervention

**Method of measurement**

Movement assessment battery for children

### 3

#### **Description**

Aiming and catching

#### **Timepoint**

Before the intervention and the end of the intervention

#### **Method of measurement**

Movement assessment battery for children

### 4

#### **Description**

Penalty of basketball

#### **Timepoint**

Before the intervention and the end of the intervention

#### **Method of measurement**

The result of the throwing basketball ball to the ring is calculated as 7 points

## **Secondary outcomes**

empty

## **Intervention groups**

### 1

#### **Description**

Intervention group: Children will take part in motor imagery training that will be delivered in 5 sessions per hour In addition common occupational therapeutic and psychological interventions based on ABA method.

#### **Category**

Rehabilitation

### 2

#### **Description**

Control group: The children of this experimental group are engaged in their common occupational therapeutic and psychological interventions based on ABA method.

#### **Category**

Rehabilitation

## **Recruitment centers**

### 1

#### **Recruitment center**

##### **Name of recruitment center**

Ashtari Rehabilitation Clinic

##### **Full name of responsible person**

Mahnaz Ashtari

##### **Street address**

No. 6, side of Yazdi Dairy shopping, Ashrafi Esfahani mosque Ave, Marzardan Blvd, Tehran.

##### **City**

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1145676914

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+98 21 6634 3060

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m.ashtari@yahoo.com

## **Sponsors / Funding sources**

### 1

#### **Sponsor**

##### **Name of organization / entity**

Kharazmi University

##### **Full name of responsible person**

Jafar Jahanpanah

##### **Street address**

Kharazmi University, No.43. South Mofatteh Ave, Tehran, iran

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##### **Province**

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##### **Postal code**

15719-14911

##### **Phone**

+98 21 8884 8944

##### **Email**

jahanpanah@khu.ac.ir

##### **Grant name**

##### **Grant code / Reference number**

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

Yes

##### **Title of funding source**

Kharazmi University

##### **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**

The university of Kharazmi

##### **Full name of responsible person**

Saeid Ahar

##### **Position**

Student

##### **Latest degree**

Master

##### **Other areas of specialty/work**

Sport Sciences

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## Person responsible for scientific inquiries

### Contact

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Farhad Ghadiri  
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Assistant Professor  
**Latest degree**  
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Sport Sciences  
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## Person responsible for updating data

### Contact

**Name of organization / entity**  
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**Full name of responsible person**  
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**Latest degree**

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**Other areas of specialty/work**  
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**Email**  
saeid.ahar@gmail.com

## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

### Study Protocol

No - There is not 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

Yes - There is a plan to make this available

### Analytic Code

No - There is not a plan to make this available

### Data Dictionary

Not applicable

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

The data that the output of the movement assessment battery for children is without identifying the subjects of the subject.

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

6 months after printing results

### To whom data/document is available

All interested persons

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

There is no specific item.

### From where data/document is obtainable

Send an email to saeid.ahar@gmail.com

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

After posting, it will take two weeks for the documentation to reach.

### Comments