

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### The effect of implicit learning versus explicit learning on the bimanual coordination of With High Functioning Autistic

#### Protocol summary

##### Study aim

The study of explicit and implicit learning ability in people with autism to understand Which learning method is more useful to these people.

##### Design

In this study, 24 high-Functional autistic children (12 to 8 years old) are divided into three groups of explicit and implicit learning and control.

##### Settings and conduct

In this study, explicit and implicit groups, in addition to the implementation of the Autism Center rehabilitation program, practice bimanual coordination skill, while the control group only performs a rehabilitation program.

##### Participants/Inclusion and exclusion criteria

High-Functional autistic people with an age range of 8-10. Entry requirements for the study. People who are outside the age range or out of the range of autism do not have inside to the study.

##### Intervention groups

The explicit learning group runs the bimanual coordination skill from the difficult to the easy level. The implicit learning group runs the bimanual coordination skill from the the easy to difficult level. The control group is evaluated only in pre-test and post-test.

##### Main outcome variables

It will reveal the appropriate training method for these people. It reduces the cost of funding and time by providing a more appropriate learning method. Improves autism indices.

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20171231038156N1**

Registration date: **2018-12-03, 1397/09/12**

Registration timing: **retrospective**

Last update: **2018-12-03, 1397/09/12**

Update count: **0**

##### Registration date

2018-12-03, 1397/09/12

##### Registrant information

###### Name

benyamin ghelichpoor

###### Name of organization / entity

The Shahid beheshti university of Tehran

###### Country

Iran (Islamic Republic of)

###### Phone

+98 17 3323 5121

###### Email address

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##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2018-05-12, 1397/02/22

##### Expected recruitment end date

2018-06-12, 1397/03/22

##### Actual recruitment start date

2018-05-12, 1397/02/22

##### Actual recruitment end date

2018-06-12, 1397/03/22

##### Trial completion date

2018-06-12, 1397/03/22

##### Scientific title

The effect of implicit learning versus explicit learning on the bimanual coordination of With High Functioning Autistic

##### Public title

Effective learning in autism.

##### Purpose

Supportive

##### Inclusion/Exclusion criteria

**Inclusion criteria:**

High Functioning Autistic

**Exclusion criteria:**

Age more than 12 years old or less than 8 years old low Functioning Autistic

**Age**

From **8 years** old to **12 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **24**

Actual sample size reached: **24**

**Randomization (investigator's opinion)**

Not randomized

**Randomization description****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**

biological sciences research center shahid beheshti university of Tehran

**Street address**

vanak sq shahid beheshti university

**City**

tehran

**Province**

Tehran

**Postal code**

4971679843

**Approval date**

2018-04-28, 1397/02/08

**Ethics committee reference number**

IR.SBU.ICBS97/1009

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

autism

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

The learning was a bimanual coordination.

**Timepoint**

Before starting the intervention and after 7 and 9 days after the intervention began

**Method of measurement**

biannual coordination test device building Padidar Omide Farda

**Secondary outcomes**

empty

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

The tool used to interact with the bimanual coordination instrument is the creation of the Padidar Omide Farda Institute. People with autism are classified into three interventional groups. The first intervention group (explicit learning group) performs the skill from easy to difficult (by changing the range of error). The second intervention group (implicit learning group) runs the skill from easy to difficult. The third intervention group (control) does no practice. At first, a pre-test was performed from all subjects, then the first and second intervention groups for 6 days, each day, trained for two-handed coordination skills for 30 minutes each day. At the end of the sixth session, the post-test was performed from all groups.

**Category**

Other

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

ofoq autism center

**Full name of responsible person**

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east shohada ave ofoq autsm center

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## Sponsors / Funding sources

1

### Sponsor

**Name of organization / entity**

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**Grant name**

**Grant code / Reference number**

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

No

**Title of funding source**

by my own

**Proportion provided by this source**

100

**Public or private sector**

Private

**Domestic or foreign origin**

Domestic

**Category of foreign source of funding**

empty

**Country of origin**

**Type of organization providing the funding**

Persons

## Person responsible for general inquiries

### Contact

**Name of organization / entity**

Shahid Beheshti university

**Full name of responsible person**

benyamin ghelolichpoor

**Position**

Phd student

**Latest degree**

Master

**Other areas of specialty/work**

Others

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## Person responsible for scientific inquiries

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## Person responsible for updating data

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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**

the information study in mean.

**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**

In the publishing process, no personal information is released from the subjects. All information is expressed

in groups.

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

3 months after printing results.

**To whom data/document is available**

Medical, academic and scientific institutions

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

Improve our knowledge

**From where data/document is obtainable**

The postal address mentioned in the article was published.

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

Once notified the request and Ensure that there is no abuse.

**Comments**