

Clinical Trial Protocol

Iranian Registry of Clinical Trials

01 Jul 2026

The Intervention of Music-Based Education on Executive Functions in High-Functioning Children with Autism

Protocol summary

Study aim

The study of the effectiveness of the music based education program on working memory in high functioning children with autism The study of the effectiveness of the music based education program on cognitive flexibility in high functioning children with autism The study of the effectiveness of the music based education program on planning in high functioning children with autism

Design

Participants must be between 7 and 15 years old and meet the criteria for entering the research the sample size was extracted using previous research and a statistical formula of 30 people, who fall into two educational and control groups. This experiment is in the initial phase, to investigate the possible effectiveness of music education on the executive functions of people with high-functioning autism spectrum. Randomization in this study was carried out after aligning the statistical community by age, gender with spss software.

Settings and conduct

Mirza Abdullah music school is located in Qom province. Each child learns music privately and for an hour

Participants/Inclusion and exclusion criteria

Diagnosis of autism spectrum disorder (High functions) by a pediatric psychiatrist or neurologist Children are 7-15 years old. Children should not have any background in music education. Children should not have Attention Deficit Hyperactivity Disorder or hyperactivity disorder. Children should not have movement restrictions on the movement of the fingers in a way that leads to restrictions on the playing of the piano instrument. Completion of the consent form by the parent and / or guardian of the child According to the Autism Diagnostic Tool Gilliam (gars 3) children should be autistic Level 1

Intervention groups

12 session of music education with piano instrument and each sessions is an hour once a week

Main outcome variables

executive functions: working memory, cognitive flexibility and planning

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20231118060101N1**

Registration date: **2023-12-12, 1402/09/21**

Registration timing: **retrospective**

Last update: **2023-12-12, 1402/09/21**

Update count: **0**

Registration date

2023-12-12, 1402/09/21

Registrant information

Name

Hadi Sarmast

Name of organization / entity

Institute for cognitive science studies

Country

Iran (Islamic Republic of)

Phone

+98 21 5662 1974

Email address

hadi_st222@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-01-20, 1401/10/30

Expected recruitment end date

2023-02-19, 1401/11/30

Actual recruitment start date

2023-05-22, 1402/03/01

Actual recruitment end date

2023-06-22, 1402/04/01
Trial completion date
2023-10-22, 1402/07/30

Scientific title
The Intervention of Music-Based Education on Executive Functions in High-Functioning Children with Autism

Public title
The Intervention of Music-Based Education on Executive Functions in High-Functioning Children with Autism

Purpose
Education/Guidance

Inclusion/Exclusion criteria

Inclusion criteria:
Diagnosis of High-Functioning Autism Spectrum from a Pediatric Psychiatrist or Neurologist Children Should Not Have Any Background in Music Education. Children Should Not Have Attention Deficit Hyperactivity Disorder Children Should Not Have Movement Restrictions on the Movement of the Fingers in a Way That Leads to Restrictions on Playing the Piano Instrument

Exclusion criteria:
Diagnosis of ADHD The Presence of Severe Mental and/or Physical Illnesses. Absence of More Than Two Sessions in the Music Education Program. Educational and Therapeutic Intervention Related to the Objectives of the Present Research During the Course of Music Education.

Age
From **7 years** old to **15 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant
- Care provider

Sample size
Target sample size: **35**
Actual sample size reached: **30**

Randomization (investigator's opinion)
Randomized

Randomization description
After Collecting the Sample Size Required for the Study, the Samples Were Matched Peer-to-Peer Based on Gender and Age, and Then Randomly Assigned into Two Control and Test Groups.

Blinding (investigator's opinion)
Double blinded

Blinding description
In The Call For Participation In This Research Project, Families Interested In Enrolling Their Children In Music Education Classes Were Invited. It Was Stated That If Certain Criteria Were Present In Their Children, The Entire Cost Of The Classes Would Be Provided Free Of Charge For A Period Of Three Months. These Criteria Were Obtained From Participants Through An Initial Assessment Session Involving Computerized Tests To Measure Executive Functions, And Those Who Met The Criteria For Entry Into The Research Were Invited To Participate. For This Purpose, A Music Education Coach

Was Recruited, Intending To Conduct A Charitable Act By Offering Free Music Education Classes For Children With Autism. In These Classes, Only A Structured Music Education Program With A Lesson Plan And Implementation Guidelines Should Be Taught For 12 One-Hour Private Sessions With Individuals Affected By Autism.

Placebo
Not used

Assignment
Single

Other design features
For Each Session There Is A Curriculum And Execution Order That Is Tailored To The Development Of Executive Functions Such As: Flexibility, Working Memory, And Planning With Musical Instruments.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

ethics committee of institute for cognitive science studies

Street address

Phase 4 of Pardis City, Tehran, Iran

City

pardis

Province

Tehran

Postal code

1658344575

Approval date

2022-12-08, 1401/09/17

Ethics committee reference number

IR.UT.IRICSS.REC.1401.041

Health conditions studied

1

Description of health condition studied

the high functioning children with autism

ICD-10 code

F84.0

ICD-10 code description

Autistic disorder

Primary outcomes

1

Description

executive functions

Timepoint

Once before music education and the time immediately after 12 music education sessions

Method of measurement

Software version of executive functions by gaming with laptop and measuring the duration and variables studied for each executive function

Secondary outcomes

empty

Intervention groups

1

Description

Intervention Group: 12 one-hour music education sessions per week, each session with a predetermined lesson plan executed by the instructor.

Category

Rehabilitation

2

Description

Control group: The Control Group Is to Measure Placebo Effect and Familiarization Error Through Pre-test

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Maktab Khaneh Mirza abdollah

Full name of responsible person

Mojtaba Khavari

Street address

no 189, shahid saduqi st, Qom

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Ghous

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Sponsors / Funding sources

1

Sponsor

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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

institute for cognitive science studies

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

Institute for cognitive science studies

Full name of responsible person

Hadi Sarmast

Position

Master student in cognitive science

Latest degree

Bachelor

Other areas of specialty/work

Neuroscience

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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

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

ما انتظار داریم که پس از پایان مطالعه ، داده های شرکت کنندگان به روشی غیرقابل شناسایی منتشر شود.

When the data will become available and for how long

Data will be made available immediately after the paper is printed

To whom data/document is available

All interested persons will have the possibility to access the data.

Under which criteria data/document could be used

No limitation will notice the use of the data obtained from the data of this study for those interested in using the scientific data of this study. And to develop and promote scientific achievements to make the most of this finding, this information and documentation are accessible.

From where data/document is obtainable

In scientific databases, this information can be obtained or if requested by email to the author in charge. Email: hadi_st222@yahoo.com

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

The applicant should send the author an email with the data of the study and receive the information they need. The author in charge is obliged to make the information required and research findings available to other researchers as soon as possible after seeing the applicant's email

Comments

The research information will be coded and referred to as online links on the internet platform from within the extracted article.