Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 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 neurologistt 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)
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+98 21 5662 1974
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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
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no 189, shahid saduqi st, Qom
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Sponsors / Funding sources

1

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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
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Other areas of specialty/work
Neuroscience
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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
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.