

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Sep 2026

The Effects of Neurofeedback on Attention Deficit Hyperactivity Disorder Symptoms, Time Perception and Mindfulness in Adults

Protocol summary

Study aim

we aim to investigate the effects of EEG theta (4-8 Hz) and beta (13-30 Hz) ratio (TBR) neurofeedback training on symptoms of attention deficit/hyperactivity disorder, time perception and mindfulness in adult patients with attention deficit disorder (ADD).

Design

Clinical trial with control group, with parallel groups, blinded, randomized, phase 2 on 30 patients. A table of random numbers was used for randomization.

Settings and conduct

Following randomization and assignment of individuals in the study groups, patients are treated approximately twice a week using neurofeedback training. This study is performed in the psychology department of Persian Gulf University

Participants/Inclusion and exclusion criteria

Inclusion criteria: Diagnosis of attention deficit disorder; submission of written consent for participation in the study; No epilepsy or neurological diseases such as brain tumor and MS. Exclusion criteria: Absence from more than three sessions, lack of interest in continuing the sessions and lack of full cooperation during the sessions.

Intervention groups

Experimental group: theta (4-8 Hz) and beta (13-30 Hz) ratio (TBR) neurofeedback training will perform in the experimental group with the monopolar protocol in 20 sessions of 45 min each across a 2 months' period. Control group: The control group does not receive feedback.

Main outcome variables

symptoms of attention deficit/hyperactivity disorder, time perception and mindfulness

General information

Reason for update

The variable of symptoms of attention deficit/hyperactivity disorder and how to evaluate it was

added. Also added information about blinding.

Acronym

IRCT registration information

IRCT registration number: **IRCT20211210053345N1**

Registration date: **2022-08-17, 1401/05/26**

Registration timing: **prospective**

Last update: **2026-07-25, 1405/05/03**

Update count: **2**

Registration date

2022-08-17, 1401/05/26

Registrant information

Name

Farzaneh Yazdani

Name of organization / entity

Persian golf university of bushehr

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-09-05, 1401/06/14

Expected recruitment end date

2022-10-06, 1401/07/14

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effects of Neurofeedback on Attention Deficit

Hyperactivity Disorder Symptoms, Time Perception and Mindfulness in Adults		Research Ethics Committee of Bushehr University of Medical Sciences	
Public title	The Effects of Neurofeedback on Attention Deficit Hyperactivity Disorder Symptoms, Time Perception and Mindfulness in Adults with Attention Deficit Disorder	Street address	University of Medical Sciences and Health Services, Moallem St., in front of Friday prayer place, Bushehr, Iran.
Purpose	Education/Guidance	City	Bushehr
Inclusion/Exclusion criteria		Province	Boushehr
Inclusion criteria:	Diagnosis of attention deficit disorder Submission of written consent for participation in the study No epilepsy or neurological diseases such as brain tumors and MS	Postal code	7514633341
Exclusion criteria:	Absence from more than three sessions Lack of interest in continuing the sessions Lack of full cooperation during the sessions	Approval date	2021-10-16, 1400/07/24
Age	From 18 years old to 45 years old	Ethics committee reference number	IR.BPUMS.REC.1400.129
Gender	Both	Health conditions studied	
Phase	N/A	1	
Groups that have been masked	• Outcome assessor • Data analyser	Description of health condition studied	
Sample size	Target sample size: 30	ICD-10 code	
Randomization (investigator's opinion)	Randomized	ICD-10 code description	
Randomization description	All patients who give consent for participation and who fulfilling the inclusion criteria are randomized using a random number table. In the random number table, a special code was assigned to each patient, respectively. To randomly assign each patient to the groups, the researcher randomly selected individuals from a table point in a row or direction.	Primary outcomes	
Blinding (investigator's opinion)	Single blinded	1	
Blinding description	Neither the therapist nor participants were blinded. However, data analysts and outcome assessors were blinded to the participants' group assignments.	Description	
Placebo	Not used	Timepoint	
Assignment	Parallel	Method of measurement	
Other design features		Secondary outcomes	
Secondary Ids	empty	1	
Ethics committees		Description	
1		Timepoint	
Ethics committee		Method of measurement	
Name of ethics committee		2	
		Description	
		Timepoint	

One week before the intervention and one week after the last intervention session

Method of measurement

It is the score that a person obtains in the mindfulness questionnaire (FFMQ)

Intervention groups

1

Description

Intervention group: theta and beta ratio neurofeedback will perform in the experimental group with the monopolar protocol in 20 sessions of 45 min each across a 2 months' period

Category

Behavior

2

Description

Control group: The control group will not receive any treatment until the end of the study.

Category

Behavior

Recruitment centers

1

Recruitment center

Name of recruitment center

Persian Gulf University

Full name of responsible person

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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

Persian Gulf 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

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Soran Rajabi

Position

Associate professor

Latest degree

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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

No - There is not 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

Undecided - It is not yet known if there will be a plan to make this available

Title and more details about the data/document

Data from participants' responses to time perception and mindfulness questionnaires in pre-test and post-test were analyzed using SPSS software, and the results, without mentioning the names of the participants, were shared as study results.

When the data will become available and for how long

The access period starts 6 months after the results are published

To whom data/document is available

The data of this study will be available only to researchers working in academic and scientific institutions.

Under which criteria data/document could be used

The data of this study will be provided for use by researchers in review or comparative studies

From where data/document is obtainable

Farzaneh Yazdani Department of Psychology, Persian Gulf University, Bushehr, Iran.
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What processes are involved for a request to access data/document

The applicant provides information about their application via email. Up to two weeks after the request, if accepted, documents or data files will be sent.

Comments