

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Sep 2026

Effect of tactile stimulation on creative thinking ,memory and motor imagery in 18-30 year-old subjects

Protocol summary

Study aim

To investigate the effect of tactile stimulation on creative thinking, memory and motor imagery in 18-30 year-old subjects

Design

single blinded randomized clinical trial with parallel control group of 100 normal subjects.

Settings and conduct

The study was a single-blind clinical trial that participated were blinded to implementation or inactivation of the tactile simulations, because the index finger of all participant were placed on the tactile stimulation device. The subjects were selected from students of Estahban Paramedical School.

Participants/Inclusion and exclusion criteria

1- Right-handed according to Edinburgh's questionnaire
2- normal or corrected visual acuity; 3. Not suffering from psychiatric disorders (bipolar type 1 and schizophrenia); 4. Not suffering from known neurological diseases such as stroke, brain trauma, seizure and mental retardation; 5. Non-use of psychotherapy drugs.

Intervention groups

Intervention group: implementation of tactial stimulation on the right index finger for 30 minutes Control group: the tactile stimulation device was turned off for 30 minutes.

Main outcome variables

creative thinking; memory; motor imagery

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180902040927N2**

Registration date: **2018-10-07, 1397/07/15**

Registration timing: **retrospective**

Last update: **2018-10-07, 1397/07/15**

Update count: **0**

Registration date

2018-10-07, 1397/07/15

Registrant information

Name

Mahdieh Azin

Name of organization / entity

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-01-21, 1396/11/01

Expected recruitment end date

2018-03-18, 1396/12/27

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of tactile stimulation on creative thinking ,memory and motor imagery in 18-30 year-old subjects

Public title

The effect of tactile stimulation on cognitive functions

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Students of Shiraz University of Medical Sciences The

age range was between 18 and 30 years old Right-handed according to Edinburgh's questionnaire normal or corrected visual acuity; Not suffering from psychiatric disorders (bipolar type 1 and schizophrenia); Not suffering from known neurological diseases such as stroke, brain trauma, seizure and mental retardation; Non-use of psychotherapy drugs.

Exclusion criteria:

Age

From **18 years** old to **30 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **160**

Randomization (investigator's opinion)

Randomized

Randomization description

simple randomization according to table of random numbers with software

Blinding (investigator's opinion)

Single blinded

Blinding description

participants were blind in this study. The tactile stimulation device was attached to the finger of all participants, regardless of the type of group, and the participant was unaware of which group was entered. Also, in all questionnaires and computer programs, only the code was used to make the participants were unaware of the type of intervention.

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of rafsanjan university of medical sciences

Street address

Rafsanjan, Gulf Blvd., Pistachio Street, School of Medicine, Rafsanjan University of Medical Sciences (RUMS)

City

Rafsanjan

Province

Kerman

Postal code

7718175911

Approval date

2017-07-23, 1396/05/01

Ethics committee reference number

IR.RUMS.REC.1396.59

Health conditions studied

1

Description of health condition studied

Healthy adults

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

reaction time

Timepoint

Before and after tactile stimulation

Method of measurement

Hand mental rotation task with PSYTASK software

2

Description

response accuracy rate

Timepoint

Before and after tactile stimulation

Method of measurement

Hand mental rotation task with PSYTASK software

3

Description

scores of Remote Association Task

Timepoint

Before and after tactile stimulation

Method of measurement

Remote Association Task questionnaire

4

Description

Originality of divergent thinking

Timepoint

Before and after tactile stimulation

Method of measurement

alternate uses task

5

Description

Fluency of divergent thinking

Timepoint

Before and after tactile stimulation

Method of measurement

alternate uses task

6

Description

Flexibility of divergent thinking

Timepoint

Before and after tactile stimulation

Method of measurement

alternate uses task

7

Description

Elaboration of divergent thinking

Timepoint

Before and after tactile stimulation

Method of measurement

alternate uses task

8

Description

Learning score

Timepoint

Before and after tactile stimulation

Method of measurement

Rey Auditory-Verbal Learning Test

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: 30 minutes of tactile stimulation of the right index finger in one session was applied. A tactile stimulation device (Kavosh Pars Mahan Sanat Co. Iran), consisting of a control unit and stimulus modules to be connected to the hands, was used. The stimulus module has nine pins (1.5 mm height) and stimulate the right fingertip for 30 minutes (16 Hz) with the aid of a computer control system. When the tactile stimulation device was attached to the participants' hands in both the sham and tactile stimulation groups, the subjects were not required to focus on stimulation or anything else.

Category

Treatment - Devices

2

Description

Control group: A tactile stimulation device (Kavosh Pars Mahan Sanat Co. Iran) were attached to right index finger but the tactile stimulation device was turned off.

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

Estahban Faculty of Paramedicine

Full name of responsible person

Maryam Rezaei Nasab

Street address

Estahban, Ghaem Blvd, Paramedical Faculty (Old Hospital)

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Rafsanjan University of Medical Sciences

Full name of responsible person

Dr. Ali Shamsizadeh

Street address

Rafsanjan, Imam Ali Blvd , Central Office of Rafsanjan University of Medical Sciences

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Kerman

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7717933777

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alishamsy@gmail.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Rafsanjan University of Medical Sciences

Proportion provided by this source

70

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

Rafsanjan University of Medical Sciences

Full name of responsible person

Mahdieh Azin

Position

Assistant Professor of Neuroscience

Latest degree

Ph.D.

Other areas of specialty/work

Neuroscience

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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

There is no further information

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available