

Clinical Trial Protocol

Iranian Registry of Clinical Trials

17 Sep 2026

The effect of neurofeedback on short-term memory and quality of life after breast cancer treatment

Protocol summary

Summary

Cancer treatment-related cognitive disorders, including memory deficits in the short term, affect a person's normal functioning and even lead to impaired activities of daily living of the people. In recent years, research into the impact on cognitive function and memory in these patients, but a closer look at the effectiveness they need to do more studies are listed. Neurofeedback therapy is one of the recommended interventions to improve memory after breast cancer treatment, But given that still in this area, especially in our country, studies have been done and also according to the needs of patients for intervention in this field, this study took shape. the purpose of this investigation, The effects of neurofeedback on short-term memory and quality of life of women who are admitted to Shohada Hospital which Been treated for breast cancer and your treatment period has elapsed and impaired short-term memory have been caused by the treatment.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016071728964N1**

Registration date: **2016-10-11, 1395/07/20**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2016-10-11, 1395/07/20

Registrant information

Name

Pooria Sarvghadi

Name of organization / entity

Faculty of Rehabilitation, Shahid Beheshti University

of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 51 3502 3238

Email address

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Recruitment status

Recruitment complete

Funding source

Shahid Beheshti University of Medical Sciences

Expected recruitment start date

2016-10-22, 1395/08/01

Expected recruitment end date

2016-12-05, 1395/09/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of neurofeedback on short-term memory and quality of life after breast cancer treatment

Public title

The effect of neurofeedback on short-term memory and quality of life after breast cancer treatment

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: 1. Patients agreed to participate in research'; 2. One-way adult patients after breast cancer surgery and only a surgical treatment, chemotherapy and radiation therapy is given; 3. Impaired short-term memory is demonstrated by Wechsler test; 4. no history of brain tumor patients or history of psychiatric disorders such as depression, obsession and neurological diseases including Alzheimer's, Parkinson's and stroke. Exclusion

criteria: 1. Neurofeedback therapy treated patients during surgery, chemotherapy and radiation; 2. In case of relapse and metastasis (grade 4 breast cancer); 3. Patients for whatever reason do not wish to continue treatment, emigrated or died; 4. Not been previously treated patients with short-term memory.

Age

From **16 years** old to **74 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **20**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Used

Assignment

Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Shahid Beheshti University of Medical Sciences

Street address

Velenjak, University Boulevard

City

Tehran

Postal code

Approval date

2016-05-29, 1395/03/09

Ethics committee reference number

IR.SBMU.REC.1395.22

Health conditions studied

1

Description of health condition studied

Breast cancer

ICD-10 code

C50.9

ICD-10 code description

Breast cancer

Primary outcomes

1

Description

Quality of Life

Timepoint

Before and after the intervention

Method of measurement

SF-36 questionnaire

2

Description

Short Term Memory

Timepoint

Before and after the intervention

Method of measurement

Wechsler memory scale

Secondary outcomes

1

Description

Alpha peak

Timepoint

Before, after 10 sessions and at the end of intervention

Method of measurement

Neurofeedback device

Intervention groups

1

Description

Intervention group: After taking a detailed history and complete a questionnaire on background information (demographic), and measurement scales before intervention Including tests of verbal memory test carried out in Wechsler memory scale and quality of life questionnaire SF-36, Neurofeedback treatment in the intervention group and the control group for placebo (Placebo) was performed. In this study, the purpose of neurofeedback, using neurofeedback flexicomp Infiniti eight-channel devices and the computer. After insertion of the electrode and wires, first, a raw EEG recorded 9 points CZ (in both open and closed eyes, quiet reading, listening, painting), FZ, PZ, F3, F4, will be carried out and after 10 sessions of arousal on it and re-interpret the raw EEG, 10 second session on alpha peak enhancement work will be in Fz point. Neurofeedback devices and computer room where it was located in a quiet environment, with minimal visual and auditory stimuli to keep up with minimal artifacts.

Category

Rehabilitation

2

Description

Control group: In the control group, while the electrodes

were placed on their heads sat in front of the monitor,
but the speakers was interrupted.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Department of Occupational Therapy, Shohada
Tajrish Hospital

Full name of responsible person

Street address

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Research Vice-Chancellor (Research and Technology)
shahid Beheshti University of Medical Sciences

Full name of responsible person

Dr Afshin Zarghi

Street address

Shahid Chamran Highway Street Yemen - Arab street
next shahid Ayatollah Taleghani Hospital

City

Tehran

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Research Vice-Chancellor (Research and Technology)
shahid Beheshti University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

Ebn Sina hospital

Full name of responsible person

Pooria Sarvghadi

Position

Occupational Therapist

Other areas of specialty/work

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**Person responsible for scientific
inquiries**

Contact

Name of organization / entity

Ebn Sina hospital

Full name of responsible person

Pooria Sarvghadi

Position

Occupational Therapist/ Master of science

Other areas of specialty/work

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Person responsible for updating data

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Name of organization / entity

Faculty of Rehabilitatin, Shahid Beheshti University of
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Full name of responsible person

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Position

Master of science/Occupational Therapy

Other areas of specialty/work

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty