

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effect of tai chi intervention for improving motor skills and executive function in older adults

Protocol summary

Study aim

This study aims to improve the motor skills and the executive functions like thinking reasoning , problem solving and memory of the older individuals using a specific form of exercises. tai chi exercises enhance self awareness and at the same time relaxes body and helps to gain a good balance , stability and aligned posture.it also shows potential to improve the cognitive functioning

Design

Randomized control trial, community based, single blind, allocated randomly through sealed envelope method into 2 groups.

Settings and conduct

The study will be conducted in the Al-Najat old home. • Participants will be included in the study after taking full informed consent. • Participants will be screened thoroughly for any exclusion, before getting enrolled. • Participants will be determined by the Single Leg Stance test to include in the study.

Participants/Inclusion and exclusion criteria

Inclusion criteria: 1) males and females of age 60 years and above. 2) individuals with Single leg stance score less than 20 seconds. Exclusion criteria: 1) color blind individuals. 2) visually impaired individuals. 3) bed bound individuals.

Intervention groups

The intervention group will be performing different tai chi moves for 6 consecutive weeks for a number of 5 days in a week, in which there will be a 10 min warm up session, 40 mins exercise session and 10 mins of cool down session.

Main outcome variables

Executive function and motor skills

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210615051585N6**

Registration date: **2023-04-29, 1402/02/09**

Registration timing: **registered_while_recruiting**

Last update: **2023-04-29, 1402/02/09**

Update count: **0**

Registration date

2023-04-29, 1402/02/09

Registrant information

Name

Saima Gul

Name of organization / entity

Shifa Tameer - e - Millat University

Country

Pakistan

Phone

+92 51 8441751

Email address

saimagul.ahs@stmu.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-04-12, 1402/01/23

Expected recruitment end date

2023-05-26, 1402/03/05

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of tai chi intervention for improving motor skills and executive function in older adults

Public title

Effect of tai chi intervention for improving motor skills and executive function in older adults

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

male and female of 60 years and above single leg stance score less than 20 seconds

Exclusion criteria:

color blind individuals bed bound individuals visually impaired individuals

Age

From **60 years** old to **85 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **77**

Randomization (investigator's opinion)

Randomized

Randomization description

Random assignment using the sealed envelope method will use. According to the sample size, 70 sheets of aluminum paper will be cut properly. This paper will be double the size of the paper. 35 sheets of carbon paper cut into appropriate sizes according to the paper used. A standard-sized square paper will take and mark with (the Tai chi group). In this way, 35 papers will mark with (Control group). The sheet of paper on which either the tai chi group or the control group will mention will then be folded to fit in the envelope. A sheet of carbon paper will place on top of the folded paper and mark either the tai chi group or the control group facing the envelope, then the sheet of aluminum foil will be wrapped on the carbon paper(with folded paper inside). All the above-prepared papers will place in the envelope (which will utterly opaque) the envelope will then be sealed. in this way, 35 envelopes for the tai chi group and 35 envelopes for the control group will prepare with a total number of 70. These envelopes will then thoroughly shuffle like a deck of cards. The envelopes will then mark with numbers 1-70. Each participant picks the envelope in order from 1-70 and will be allotted to the group(tai chi group or control group) accordingly.

Blinding (investigator's opinion)

Single blinded

Blinding description

Only the researcher doing the study knows which treatment or intervention the participant is receiving until the intervention is complete. It makes results less likely to be biased. For that, People receiving treatment will engage to the same extent, also, therapist who will deliver treatment do so with the same effort and enthusiasm, regardless of whether they are delivering treatment or a control.

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

institutional review board and ethics committee of shifa international hospital

Street address

shifa international hospital, pitrus bukhari road, h-8, islamabad.

City

Islamabad

Postal code

44000

Approval date

2023-04-04, 1402/01/15

Ethics committee reference number

015-23

Health conditions studied**1****Description of health condition studied**

Old age

ICD-10 code

R54

ICD-10 code description

Age-related physical debility

Primary outcomes**1****Description**

Motor skills and executive functions

Timepoint

Before intervention and 6 weeks after intervention.

Method of measurement

Time up and go test, stroop test, trail making test.

Secondary outcomes**1****Description**

Balance, activities of daily living

Timepoint

Baseline and after intervention

Method of measurement

Single leg stance test, barthel index

Intervention groups

1

Description

Intervention group: For this group, a series of tai chi exercises will be carried out in smooth pattern. Doing Tai chi exercises in a specific pattern will improve individuals ability to perform coordinated activities, body awareness, mental focus and flexibility. Each training session consist of a 10-minute warm-up, 40 minutes practicing basic Tai Chi forms, and a 10-minute cool-down. These session will last for 6 consecutive weeks for a number of 5 days per week.

Category

Rehabilitation

2

Description

Control group: this group will receive a basic protocol of 60 minutes involving 10 minutes warms up 10 minutes of static stretching of major muscle groups , 40 minute aerobic exercises and 10 minutes cool down. These sessions will be given for 6 weeks consecutively for 5 days per week.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Najjat old homes

Full name of responsible person

Azhar Tanveer Malik

Street address

Saidpur rd, near Muslim Higher School, Asghar mall scheme, Rawalpindi

City

Rawalpindi

Postal code

46000

Phone

+92 51 4411111

Email

saherfatmimspt21@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shifa Tameer e Millat University

Full name of responsible person

Dr Saima Gul

Street address

Department of Rehabilitation Sciences, Park Rd campus Chak shahzad, Islamabad

City

Islamabad

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Saimagul.ahs@stmu.edu.pk

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Shifa Tameer e Millat University

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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Shifa Tameer e Millat University

Full name of responsible person

Dr Saima Gul

Position

Associate Professor

Latest degree

Ph.D.

Other areas of specialty/work

Neuroscience

Street address

Department of Rehabilitation Sciences, Park Rd campus Chak shahzad, Islamabad

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Person responsible for scientific inquiries

Contact

Name of organization / entity

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Person responsible for updating data**Contact****Name of organization / entity**

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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

Due to ethical considerations

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