

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

27 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

#### Postal code

44000

#### Phone

+92 51 8441751

#### Fax

+92 51 8441751

#### Email

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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##### Province

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## Person responsible for scientific inquiries

#### Contact

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Shifa Tameer e Millat University

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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