Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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+92 51 8441751

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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 hosptial, 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

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46000

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+92 51 4411111

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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

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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

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Latest degree
Ph.D.
Other areas of specialty/work
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Person responsible for updating data

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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