Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

EFFECTS OF SINGLE TASK TRAINING VERSUS DUAL TASK TRAINING ON BALANCE AND COGNITION IN OLDER ADULTS

Protocol summary

Study aim
To determine the effect of single task training versus dual task training on balance and cognition in older adults

Design
A concealed, randomized, double blinded trial

Settings and conduct
Study will be conducted at Najjat trust old home Rawalpindi, Pakistan.

Participants/Inclusion and exclusion criteria
Inclusion criteria: both male and female; age of the participants between 50 years and above; able to walk independently without assistive devices; Mini-Mental State Examination (MMSE) score between 18 to 23; Berg balance scale score less than 50. Exclusion criteria: participant who had recent history of fall within one year; unstable medical condition; significant visual and auditory impairments; unwillingness for participation in the study; presence of other neurological or musculoskeletal conditions affecting balance.

Intervention groups
Control group: participants will perform functional tasks that require balance like, tandem standing with eyes open and closed, transferring from one chair to another chair, single leg standing on alternate legs, walking with a reduced base of support, obstacle crossing. Participants will perform the training 3 days a week for up to 8 weeks; 5 minutes warm up followed by 30 minutes training session and 5 minutes cool down.
Treatment group: participants will perform balance tasks like, tandem standing with eyes open and closed, transferring from one chair to another chair, single leg standing on alternate legs, walking with a reduced base of support, obstacle crossing simultaneously with cognitive task. Participants will perform the training 3 days a week for up to 8 weeks; 5 minutes warm up followed by 30 minutes training session and 5 minutes cool down.

Main outcome variables
Berg balance scale; Time up and go test; Mini Mental State Examination; Montreal Cognitive Assessment

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20210909052419N1**
Registration date: **2021-09-19, 1400/06/28**
Registration timing: **registered_while_recruiting**

Last update: **2021-09-19, 1400/06/28**
Update count: **0**

Registration date
2021-09-19, 1400/06/28

Registrant information

Name
Hafsah Gul Khattak
Name of organization / entity
University of Lahore, Islamabad campus
Country
Pakistan
Phone
+92 51 4509595
Email address
hafsah.gul@uipt.uol.edu.pk

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2021-05-02, 1400/02/12

Expected recruitment end date
2021-10-30, 1400/08/08

Actual recruitment start date
empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

EFFECTS OF SINGLE TASK TRAINING VERSUS DUAL TASK TRAINING ON BALANCE AND COGNITION IN OLDER ADULTS

Public title

EFFECTS OF SINGLE TASK TRAINING VERSUS DUAL TASK TRAINING ON BALANCE AND COGNITION IN OLDER ADULTS

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Both male and female participants of age 50 years and above Able to ambulate independently walk without assistive devices Mini-Mental State Examination (MMSE) score between 18 to 23 Berg balance scale score less than 50

Exclusion criteria:

Participant who had recent history of fall within one year Unstable medical condition Significant visual and auditory impairments Presence of other neurological or musculoskeletal conditions affecting balance Unwillingness for participation in the study

Age

From **50 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample size

Target sample size: **68**

Randomization (investigator's opinion)

Randomized

Randomization description

The subjects will be randomly divided into 2 groups (experimental and control group) by sealed envelope method using convenient sampling technique and informed consent will be taken from each patient who willing to participate in the study.

Blinding (investigator's opinion)

Double blinded

Blinding description

Participants of both control and experimental group as well as the person who will assess the outcomes before and after application of intervention.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Institutional Review Board of University Institute of Physical Therapy University of Lahore.

Street address

6.7 Km Japan road, Sihala zone-5

City

Islamabad

Postal code

44000

Approval date

2021-04-15, 1400/01/26

Ethics committee reference number

UOL/UIPT/ IRB/EC/000100

Health conditions studied

1

Description of health condition studied

Balance and cognition in older adult

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Balance

Timepoint

Before intervention and after 8 weeks post intervention.

Method of measurement

Berg balance scale, Timed up and go test.

2

Description

Cognition

Timepoint

Before intervention and after 8 weeks post intervention.

Method of measurement

Mini mental state examination , Montreal Cognitive Assessment

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Dual task training group participants will perform balance tasks like, tandem standing with eyes open and closed, transferring from one chair to another chair, single leg standing on alternate legs, walking with a reduced base of support, obstacle crossing simultaneously with cognitive task. Participants will perform the training 3 days a week for up to 8 weeks; 5 minutes warm up followed by 30 minutes training session and 5 minutes cool down.

Category

Rehabilitation

2

Description

Control group: Single task training group participants will perform functional tasks that require balance like, tandem standing with eyes open and closed, transferring from one chair to another chair, single leg standing on alternate legs, walking with a reduced base of support, obstacle crossing. Participants will perform the training 3 days a week for up to 8 weeks; 5 minutes warm up followed by 30 minutes training session and 5 minutes cool down.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Najjat trust old home

Full name of responsible person

Dr. Yaqoob Malik

Street address

P-330, Janglat Road, Banni

City

Rawalpindi

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46000

Phone

+92 51 5165304

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hafsah.gul@uipt.uol.edu.pk

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Self

Full name of responsible person

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Grant name

Grant code / Reference number

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

Yes

Title of funding source

Self

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

University Institute of Physical Therapy University of Lahore, Islamabad campus, Pakistan

Full name of responsible person

Hafsah Gul Khattak

Position

Lecturer

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available

Study Protocol
Yes - There is a plan to make this available

Statistical Analysis Plan
Yes - There is a plan to make this available

Informed Consent Form
Yes - There is a plan to make this available

Clinical Study Report
Not applicable

Analytic Code
Not applicable

Data Dictionary
Not applicable

Title and more details about the data/document
Effect of single task training versus dual task training on balance and cognition in older adults; data regarding outcome measures will be shared.

When the data will become available and for how long
After the publication of the study.

To whom data/document is available
for research and clinical purposes to healthcare professional working in academic and clinical settings

Under which criteria data/document could be used
On informed request from the investigators

From where data/document is obtainable
via email

What processes are involved for a request to access data/document
by sending an email

Comments