Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effectiveness of pilates exercises with breathing re-education on pain, endurance, sleep and disability in working women with chronic non specific neck pain.

Protocol summary

Study aim

The aim of this study is to see effects of Pilates exercises with breathing reeducation on pain, endurance, sleep and disability in working women with chronic neck pain. This study show how non-invasive and effective treatments can improve the quality of life for working women with chronic neck pain.

Design

Two arm parallel group ,single blinded , single centered, randomized clinical trial.

Settings and conduct

Ghurki Trust Teaching Hospital Lahore, Pakistan.

Participants/Inclusion and exclusion criteria

INCLUSION CRITERIA: • Age 25-50 years old • Pain for more than 3 months • Females from white collar professions with daily 6 to 8 working hours per day • Pain intensity of less than or equal to 6 on NPRS EXCLUSION CRITERIA: • Cervical radiculopathy • Rheumatological conditions • History of trauma i.e., whiplash injuries • Neurological disorders such as stroke, Parkinson or multiple sclerosis • Tumor • Pregnancy, as it can affect pain perception and exercise tolerance • Respiratory condtions like asthma, COPD

Intervention groups

BREATHING RE-EDUCATION GROUP: The patients in the intervention group received baseline treatment in the form of hot pack and neck isometric exercises 10*10 for 10 minutes. After wards patients performed mat pilates exercises for 30 minutes including swan dive, neck rolls ,cervical spine retraction chin tucks ,nodding, shoulder shrugs followed by breathing exercises for 15 minutes. The intervention was applied on alternate days for 6 weeks.

Main outcome variables

Pain, Endurance, Neck Disability, Sleep

General information

Reason for update

Acronym

PBNPS

IRCT registration information

IRCT registration number: **IRCT20200226046623N2**
Registration date: **2025-01-02, 1403/10/13**
Registration timing: **registered_while_recruiting**

Last update: **2025-01-02, 1403/10/13**
Update count: **0**

Registration date

2025-01-02, 1403/10/13

Registrant information

Name
sahreen Anwar
Name of organization / entity
The University of Lahore
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Pakistan
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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-10-31, 1403/08/10

Expected recruitment end date

2025-04-20, 1404/01/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date
empty

Scientific title
Effectiveness of pilates exercises with breathing re-education on pain, endurance, sleep and disability in working women with chronic non specific neck pain.

Public title
role of Pilatese exercises with breathing reeducation in working women with chronic neck pain.

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age 25-50 years old Pain for more than 3 months Females from white collar professions with daily 6 to 8 working hours per day • Pain intensity of less than or equal to 6 on NPRS

Exclusion criteria:
Cervical radiculopathy Rheumatological conditions Neurological disorders Pregnancy, as it can affect pain perception and exercise tolerance Respiratory conditions like COPD

Age
From **25 years** old to **50 years** old

Gender
Female

Phase
4

Groups that have been masked

- Participant

Sample size
Target sample size: **52**

Randomization (investigator's opinion)
Randomized

Randomization description
Randomization was done using a computer generated block randomization scheme through "Random allocation" software. The blocks had different sizes(4,6,8) to ensure that the randomization process was unpredictable and to avoid selection bias. An automated randomization list was achieved with attrition rate included.

Blinding (investigator's opinion)
Single blinded

Blinding description
In this study only participants were blinded. This meant that participants were unaware of whether they were in breathing re-education group or pilates group.

Placebo
Not used

Assignment
Parallel

Other design features
It was a single blinded parallel randomized clinical trial.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethical Committee,Faculty of Rehabilitation Sciences, Lahore university of Biological and Applied Sc

Street address
Tulspura, Canal Bank ,North Lahore 53400

City
Lahore

Postal code
54000

Approval date
2024-07-24, 1403/05/03

Ethics committee reference number
ERC/FORS/24/10

Health conditions studied

1

Description of health condition studied
Chronic Nack Pain

ICD-10 code
M54.2

ICD-10 code description
Cervicalgia

Primary outcomes

1

Description
Pain

Timepoint
Before intervention, and 3,6 weeks after intervention.

Method of measurement
Numeric Pain rating Scale (NPRS)

2

Description
Neck Disability

Timepoint
Before intervention, and 3,6 weeks after intervention.

Method of measurement
Neck Disability Index

Secondary outcomes

1

Description
Endurance

Timepoint
Before intervention, and 3,6 weeks after intervention.

Method of measurement
Craniocervical Flexion Test

2

Description
Sleep
Timepoint
Before intervention, and 3,6 weeks after intervention.
Method of measurement
Insomnia Severity Index (ISI)

Intervention groups

1

Description
Intervention group1:The patients in the intervention group received baseline treatment in the form of hot pack and neck isometric exercises 10*10 for 10 minutes. After wards patients performed mat pilates exercises for 30 minutes including swan dive, neck rolls ,cervical spine retraction chin tucks ,nodding, shoulder shrugs followed by breathing exercises for 15 minutes, the intervention was applied on alternate days for 6 weeks.
Category
Treatment - Other

2

Description
Control group: The patients in the Pilates group received baseline treatment in the form of hot pack and neck isometric exercises 10*10 for 10 minutes. After wards patients performed mat Pilates exercises for 30 minutes including swan dive, neck rolls ,cervical spine retraction chin tucks ,nodding, shoulder shrugs . The intervention was applied on alternate days for 6 weeks.
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Ghurki Trust Teaching Hospital,Lahore, Pakistan.
Full name of responsible person
Dr. Hassan Bin Akram
Street address
Band Road GT Road Link Jallo Morr Lahore
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54300
Phone
+92 333 4774363
Email
mianhassan653@gmail.com
Web page address

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Lahore University of Biological and Applied Sciences
Full name of responsible person
Rahmeen Murtaza
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20 Qasim Block Rizwan Garden,Lahore
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54300
Phone
+92 321 4087737
Email
Rahmeenmaan2000@gmail.com
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Lahore University of Biological And Applied Sciences
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
Other

Person responsible for general inquiries

Contact
Name of organization / entity
Lahore, University of Biological And Applied Sciences
Full name of responsible person
Sahreen Anwar
Position
Associate Professor
Latest degree
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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
Data will only be available upon request depending on the purpose of acquisition of the data.

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