Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 2026

The comparison of Effects of stabilization exercises and proprioceptive neuromuscular facilitationon balance in patients with chronic non-specific neck pain

Protocol summary

Study aim
Determining the effect of stabilizing exercises and neuromuscular facilitation exercises on balance in patients with non-specific chronic neck pain

Design
Clinical trial, two groups of 17 people, randomly using permutation blocks, parallel and one-blind.

Settings and conduct
34 patients referred by Zahedan specialists will be randomly divided into two groups of stability training and neuromuscular facilitation training. The subjects will not be aware of the existence of two exercise groups. Therefore, this study is a single-blind randomized clinical trial. The written informed consent form, the general questionnaire and VAS (pain rate) and NDI (disability rate) are filled in.Cranial cervical flexion test is also performed.

Participants/Inclusion and exclusion criteria
Both sexes between 20 and 50 years - with neck pain that lasts 12 weeks or more. It is not divided into any special group. No referral pain to the distal upper extremity, no pregnancy - no treatment of neck or shoulder in the last three months No history of musculoskeletal disorders - No history of head trauma - No history of visual or auditory or speech impairment

Intervention groups
The two groups included the stability training group and the neuromuscular facilitation group

Main outcome variables
General static balance with eyes open and closed. Dynamic balance with eyes open and closed. External static balance with eyes open and closed. Internal dynamic balance with eyes open and closed. Anterior posterior with eyes open and closed. Cranio cervical flexion test

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20210725051976N1**
Registration date: **2021-09-08, 1400/06/17**
Registration timing: **registered_while_recruiting**

Last update: **2021-09-08, 1400/06/17**
Update count: **0**

Registration date
2021-09-08, 1400/06/17

Registrant information

Name
marzieh mohammadi
Name of organization / entity
Country
Iran (Islamic Republic of)
Phone
+98 54 3327 5628
Email address
mz.mohammadi@zaums.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2021-08-23, 1400/06/01

Expected recruitment end date
2021-10-23, 1400/08/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The comparison of Effects of stabilization exercises and proprioceptive neuromuscular facilitationon balance in patients with chronic non-specific neck pain

Public title
The comparison of Effects of stabilization exercises and proprioceptive neuromuscular facilitationon balance in patients with chronic non-specific neck pain

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Of both sexes, men and women between the ages of 20 and 50Have neck pain that lasts 12 weeks or more.

Exclusion criteria:
Referral and radicular pain to the distal upper limb History of musculoskeletal disorders No history of head trauma No history of visual or hearing or speech impairment Having treatment in the last three months in the neck or shoulder area Pregnancy Take painkillers, sedatives and alcohol 48 hours before the test

Age
From **20 years** old to **50 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **34**

Randomization (investigator's opinion)
Randomized

Randomization description
Patients in both groups will be selected using the easy (available) sampling method. As soon as patients arrive, permutation blocks will be assigned to one of the two groups by stratified randomization (Figure below) B: Stability Exercises Group A: Neuromuscular facilitation exercises group In this method, after determining the age and then gender, the following table enters the groups, so that for example, the first person under 40 years old enters group B, the second B and the third and fourth person under 40 years old enter group A. . This method makes the groups the same in terms of age and gender.

Blinding (investigator's opinion)
Single blinded

Blinding description
. The subjects will not be aware of the existence of two exercise groups

Placebo
Not used

Assignment
Parallel

Other design features
In the present study of the Biodex balance device, which is a more accurate and objective tool, the assessments are by standing on the platform and moving the degree and precise center of mass of the body on the screen, which is more accurate information with higher sensitivity than movements. The center of mass of the body, separately in the anterior-posterior, internal and external directions, provides general stability index and information related to equilibrium reactions on different pages and can be used in different static, dynamic and displacement conditions. Provides individual assessments to the assessor in a quantified and accurate manner.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committee of Zahedan University of Medical Sciences

Street address
Zibashahr, Alborz 4, sixth door on the left

City
zahedan

Province
Sistan-va-Balouchestan

Postal code
9817943473

Approval date
2021-05-25, 1400/03/04

Ethics committee reference number
IR.ZAUMS.REC.1400.079

Health conditions studied

1

Description of health condition studied
Chronic nonspecific neck pain

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
The overall static balance with my eyes open

Timepoint
At the beginning of the study and 8 weeks after the start of training

Method of measurement
Based on the deviation of the Biodex device

2

Description
The overall static balance with my eyes closed

Timepoint
At the beginning of the study and 8 weeks after the start

of training

Method of measurement

Based on the deviation of the Biodex device

3

Description

Overall dynamic balance with my eyes closed

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Based on the deviation of the Biodex device

4

Description

Overall dynamic balance with my eyes open

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Based on the deviation of the Biodex device

5

Description

Internal and external static balance with my eyes open

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Based on the deviation of the Biodex device

6

Description

Internal and external static balance with my eyes closed

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Based on the deviation of the Biodex device

7

Description

Internal and external dynamic balance with my eyes open

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Based on the deviation of the Biodex device

8

Description

Internal and external dynamic balance with my eyes closed

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Based on the deviation of the Biodex device

9

Description

Anterior and posterior static balance with my eyes open

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Based on the deviation of the Biodex device

10

Description

Anterior and posterior static balance with my eyes closed

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Based on the deviation of the Biodex device

11

Description

Anterior and posterior dynamic balance with my eyes open

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Based on the deviation of the Biodex device

12

Description

Anterior and posterior dynamic balance with my eyes closed

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Based on the deviation of the Biodex device

13

Description

Cranial cervical flexion test

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Compression biofeedback

14

Description

pain

Timepoint

At the beginning of the study and 8 weeks after the start of training

Method of measurement

Visual Analogue Scale

15

Description
The degree of functional disability
Timepoint
At the beginning of the study and 8 weeks after the start of training
Method of measurement
Neck Disability Index

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Stability exercises
Category
Rehabilitation

2

Description
Intervention group: Neuromuscular facilitation exercises
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Khatam Al-Anbia Hospital
Full name of responsible person
Ms. Fatemeh Nazari
Street address
Jam Jam Street
City
zahedan
Province
Sistan-va-Balouchestan
Postal code
9816933743
Phone
+98 54 3322 0501
Email
mz.mohammadi@zaums.ac.ir

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Zahedan University of Medical Sciences
Full name of responsible person
Dr. Noor Mohammad Bakhshani
Street address
sixth door on the left ,Alborz 4 ,Zibashahr
City
zahedan
Province
Sistan-va-Balouchestan
Postal code
9817943473
Phone
+98 54 3328 5627
Email
mz.mohammadi@zaums.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Zahedan University of Medical Sciences
Proportion provided by this source
100
Public or private sector
Public
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
Zahedan University of Medical Sciences
Full name of responsible person
marzieh mohammadi
Position
Student
Latest degree
Bachelor
Other areas of specialty/work
Physiotherapy
Street address
Zibashahr, Alborz 4, sixth door on the left
City
zahedan
Province
Sistan-va-Balouchestan
Postal code
9817943473
Phone
+98 54 3328 5627
Email
mz.mohammadi@zaums.ac.ir

Person responsible for scientific inquiries

Contact

Name of organization / entity
Zahedan University of Medical Sciences
Full name of responsible person
Marzieh Mohammadi
Position
Student
Latest degree
Bachelor
Other areas of specialty/work
Physiotherapy
Street address
No.4,alborz alley.alborz ave
City
Zahedan
Province
Sistan-va-Balouchestan
Postal code
9817943473
Phone
+98 54 3327 5628
Fax
Email
MZ.MOHAMMADI@zaums.ac.ir

Person responsible for updating data

Contact
Name of organization / entity
Zahedan University of Medical Sciences
Full name of responsible person
Marzieh Mohammadi
Position
Student
Latest degree
Bachelor
Other areas of specialty/work
Physiotherapy
Street address
No.4,alborz alley.alborz ave
City
Zahedan
Province
Sistan-va-Balouchestan
Postal code
9817943473
Phone
+98 54 3327 5628
Fax
Email
MZ.MOHAMMADI@zaums.ac.ir

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
Yes - There is a plan to make this available
Analytic Code
Yes - There is a plan to make this available
Data Dictionary
Yes - There is a plan to make this available
Title and more details about the data/document
Part of the data, such as information about the main outcome, can be shared.
When the data will become available and for how long
Access period starts from 1401 "
To whom data/document is available
Real people working in academic and scientific institutions
Under which criteria data/document could be used
Study
From where data/document is obtainable
mz.mohammady@yahoo.com
What processes are involved for a request to access data/document
Request by email and review and consult with the tutor and announce the result
Comments