

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison of the Effectiveness of Scapular Stabilization Exercises with Abdominal Control Feedback with Neck stabilization Exercises on Pain, Posture, Muscles Electromyography Activity in Patients with Non-specific Chronic Neck Pain and Forward Head Deformity

#### Protocol summary

##### Study aim

The General Aim of the Research is to Compare Scapular Stabilization Exercises with Neck Stabilization Exercises on Pain, Posture, Electromyographic Activity of Muscles in Subjects with Forward Head Deformity and Non-Specific Chronic Pain

##### Design

The Clinical Trial will have a Control Group, with Parallel Groups, Double-Blind, Randomized on 42 Female Patients with Chronic Neck Pain and Forward Head Deformity.

##### Settings and conduct

Using the Notice, Female Students are Requested to Refer to the Sports Science Laboratory of Shahid Beheshti University if they wish to Participate in the Research. The Samples will be Included in the Study According to the Entry Criteria. Assessments will be made and reviewed again after Four Weeks.

##### Participants/Inclusion and exclusion criteria

The Statistical Population of the Current Research will be Young Female Students of Shahid Beheshti University with Forward Head Deformity (Craniovertebral Angle less than 50 Degrees) and Chronic Neck Pain. Entry Requirements: Age Range between 20 and 30 years, No Sports History in the last 6 months, no history of surgery, trauma or accident and fracture in the Upper Limb Area, Having Neck Pain, Score Equal to or more than 3 According to WAS, Forward Head Posture. Conditions of Non-Entry: Surgery on the Spine, Suffering from Neurological and Orthopedic Diseases

##### Intervention groups

After Evaluating the Entry Criteria and Entering the Study, Subjects will be divided into two Intervention Groups (Neck Stabilization Exercises and Scapular Stabilization Group with Abdominal Control Feedback) and a Control Group.

#### Main outcome variables

According to the Intensity of the Exercises and the Exercise Protocol used in the Recent studies, there will be No Special Consequences for Subjects.

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20221022056265N1**  
Registration date: **2023-05-20, 1402/02/30**  
Registration timing: **registered\_while\_recruiting**

Last update: **2023-05-20, 1402/02/30**

Update count: **0**

##### Registration date

2023-05-20, 1402/02/30

##### Registrant information

##### Name

mohadese mahboubi nia

##### Name of organization / entity

Shahid beheshti university

##### Country

Iran (Islamic Republic of)

##### Phone

+98 34 4220 1027

##### Email address

m.mahboubinia@mail.sbu.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2023-05-10, 1402/02/20

**Expected recruitment end date**

2023-07-11, 1402/04/20

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

Comparison of the Effectiveness of Scapular Stabilization Exercises with Abdominal Control Feedback with Neck stabilization Exercises on Pain, Posture, Muscles Electromyography Activity in Patients with Non-specific Chronic Neck Pain and Forward Head Deformity

**Public title**

Comparison of the Effectiveness of Scapular Stabilization Exercises with Neck Stabilization Exercises on some Factors in Patients with Chronic Neck Pain and Forward Head Posture

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

Age Range 20 to 30 Years Having Pain in the Neck for more than Three Months Having Head Forward Deformity Normal Body Mass Index Absence of Pregnancy Not taking Certain Drugs Having a Score Equal to or Greater than 3 Based on the Pain Scale No History of Surgery, Trauma or Accident and Fracture in the Upper Limb Area Lack of Sports Experience in the Last 6 Months or in the Process of Studying

**Exclusion criteria:**

Subject's Unwillingness to continue the Research Failure to participate in the Post-Test Doing any Parallel Treatment or Similar Activity During the Research Absence of more than 2 Consecutive Sessions or 3 non-Consecutive Sessions During the Training Period And any Factor that disrupts the Research Process after the Pre-Test, so that the Subject is not able to continue Cooperating in the Research

**Age**

From **20 years** old to **30 years** old

**Gender**

Female

**Phase**

N/A

**Groups that have been masked**

- Data analyser

**Sample size**

Target sample size: **42**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

The Grouping of Patients will be Done using the Random Block Method. The Patients don't know which Group they will be in, Then the Subjects will be divided into Three Groups of 14 people: The First Group will receive Scapular Stabilization Exercises with Abdominal Feedback, the Second Group will receive Neck

Stabilization Exercises, and the Third Group will be the Control Group. They will not receive any Sports Intervention. Because the Execution of the Exercises will be under the Supervision of the Examiner, the Examiner will not be Blind, but the Data Analyst and Statistician will not have any Information about the Grouping of the Subjects

**Blinding (investigator's opinion)**

Double blinded

**Blinding description**

In this Study, because the Exercises will be under the Supervision of the Examiner, the Examiner won't be Blind, but the Data Analyst and Statistician won't have any Information about the Grouping of the Subjects

**Placebo**

Not used

**Assignment**

Parallel

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Ethics Committee of Shahid Beheshti University  
Research

**Street address**

No. 1, Shahid Heydari Alley, Ibn Sina Street, Sirjan,  
Kerman, Iran

**City**

Sirjan

**Province**

Kerman

**Postal code**

7818674788

**Approval date**

2022-10-09, 1401/07/17

**Ethics committee reference number**

IR.SBU.REC.1401.085

**Health conditions studied****1****Description of health condition studied**

Chronic Non-Specific Neck Pain - Forward Head Deformity

**ICD-10 code**

G89.29

**ICD-10 code description**

Other chronic pain

**Primary outcomes****1****Description**

Pain Score based on Visual Analog Scale (VAS)

#### **Timepoint**

At the Beginning of the Study (before the Start of the Intervention) and after Four Weeks, both in the Training Groups and in the Control Group

#### **Method of measurement**

Pain Measurement will be Done using a Visual analog Scale (WAS Ruler)

### 2

#### **Description**

Craniovertebral Angle (CV)

#### **Timepoint**

At the Beginning of the Study (before the Start of the Intervention) and after Four Weeks, both in the Training Groups and in the Control Group

#### **Method of measurement**

The Measurement of the Craniovertebral Angle will be done using the Photogrammetric Method

### 3

#### **Description**

Investigating the Electromyographic Activity of Muscles (Including the Timing and Maximum Activation) in the Muscles: Upper Trapezius, Middle Trapezius, Lower Trapezius, Serratus Anterior and Sternocleidomastoid

#### **Timepoint**

At the Beginning of the Study (before the Start of the Intervention) and after Four Weeks, both in the Training Groups and in the Control Group

#### **Method of measurement**

Measurement of Electromyographic Activity of Muscles will be done using a Surface Electromyography Device

## **Secondary outcomes**

empty

## **Intervention groups**

### 1

#### **Description**

The First Intervention Group: Scapular Stabilization Exercises with Abdominal Control Feedback, this Group will perform the Specified Exercises Three Sessions a Week for Four Weeks in a Period of 40 to 50 Minutes

#### **Category**

Other

### 2

#### **Description**

The Second Intervention Group: Neck Stabilization Exercises, this Group Performs the Specified Exercises Three Times a Week for Four Weeks and for a Duration of 40 to 50 Minutes

#### **Category**

Treatment - Other

### 3

#### **Description**

Control Group: Without any Exercise Intervention

#### **Category**

Other

## **Recruitment centers**

### 1

#### **Recruitment center**

##### **Name of recruitment center**

Laboratory of Corrective Exercises, Faculty of Physical Education and Sports Sciences, Shahid Behesh

##### **Full name of responsible person**

Cirus Sheikhi

##### **Street address**

Shahid Shahriari Square, Evin, Tehran

##### **City**

Tehran

##### **Province**

Tehran

##### **Postal code**

1983969411

##### **Phone**

+98 21 29901

##### **Email**

m.mahboubinia@mail.sbu.ac.ir

## **Sponsors / Funding sources**

### 1

#### **Sponsor**

##### **Name of organization / entity**

Shahid Beheshti University

##### **Full name of responsible person**

Sajad Mehrabi

##### **Street address**

Shahid Beheshti University, Shahid Shahriari Square, Evin, Tehran

##### **City**

Tehran

##### **Province**

Tehran

##### **Postal code**

1983969411

##### **Phone**

+98 21 29901

##### **Email**

pr-office@sbu.ac.ir

#### **Grant name**

#### **Grant code / Reference number**

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

Yes

#### **Title of funding source**

Shahid Beheshti University

#### **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

**Province**  
Tehran  
**Postal code**  
1416634651  
**Phone**  
+98 21 29901  
**Email**  
pr-office@sbu.ac.ir  
**Web page address**

## Person responsible for general inquiries

### Contact

**Name of organization / entity**  
Shahid Beheshti University  
**Full name of responsible person**  
Mohadese Mahboubi Nia  
**Position**  
MSc Student  
**Latest degree**  
Bachelor  
**Other areas of specialty/work**  
Sports Pathology and Corrective Exercises  
**Street address**  
Next to Espinas Hotel, Keshavarz Boulevard, Valiasr  
Square, Tehran,  
**City**  
Tehran  
**Province**  
Tehran  
**Postal code**  
1416634651  
**Phone**  
+98 21 8896 5310  
**Email**  
pr-office@sbu.ac.ir

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Shahid Beheshti University  
**Full name of responsible person**  
Mohadese Mahboubi Nia  
**Position**  
MSc Student  
**Latest degree**  
Bachelor  
**Other areas of specialty/work**  
Sports Pathologist and Corrective Exercises  
**Street address**  
Next to Espinas Hotel, Keshavarz Boulevard, Valiasr  
Square, Tehran  
**City**  
Tehran

## Person responsible for updating data

### Contact

**Name of organization / entity**  
Shahid Beheshti University  
**Full name of responsible person**  
Mohadese Mahboubi Nia  
**Position**  
MSc Student  
**Latest degree**  
Bachelor  
**Other areas of specialty/work**  
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**Street address**  
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Tehran, IRAN  
**City**  
Tehran  
**Province**  
Tehran  
**Postal code**  
1416634651  
**Phone**  
+98 21 29901  
**Email**  
mahboubi.mohadese@gmail.com

## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

### Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

### Statistical Analysis Plan

Not applicable

### Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

### Clinical Study Report

Not applicable

### Analytic Code

Not applicable

### Data Dictionary

Not applicable