Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effect of proprioceptive exercise and postural training on neck and disability index and neck and shoulder muscles fatigue in female dentists with unspecific neck pain

Protocol summary

Study aim

The aim of this study is to compare the effect of proprioceptive exercise and postural training on neck pain and disability index and neck and shoulder muscles fatigue in female dentists with unspecific neck pain.

Design

This study is a clinical trial study with 48 dentists, Which consists of two experimental groups (experimental group 1 and experimental group2) and one randomized control group (Using the random allocation rule). Interventions include proprioceptive exercises with postural correction.

Settings and conduct

Firoozgar hospital Neck pain and disability of neck and shoulder muscles fatigue will be measured at first and 6 weeks after the intervention in 3 groups.The variables included neck pain measurement using a Visual Analog Scale Questionnaire and for measuring muscle fatigue using the mid frequency of electromyography and Neck Disability Index, which is a neck pain disability Index questionnaire.

Participants/Inclusion and exclusion criteria

Inclusion criteria include woman with pain scale less than 3 and disability index less than 28 and Subjects will exclude if they have neck or shoulder pain from non-musculature causes and if they have undergone cervical spine surgery; reported any neurological signs.

Intervention groups

Subjects will be randomly divided into three groups. The first group will receive proprioceptive exercises with postural training while the second group will just receive proprioceptive exercise and the third group will receive no intervention.

Main outcome variables

measuring Neck pain- Neck disability and muscles fatigue.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT2017010119750N2**
Registration date: **2017-03-18, 1395/12/28**
Registration timing: **retrospective**

Last update: **2018-09-17, 1397/06/26**
Update count: **1**

Registration date

2017-03-18, 1395/12/28

Registrant information

Name

Anahita Bolandian

Name of organization / entity

Tehran

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research of Iran University of Medical Sciences

Expected recruitment start date

2016-05-20, 1395/02/31

Expected recruitment end date

2016-12-20, 1395/09/30

Actual recruitment start date

2016-05-20, 1395/02/31

Actual recruitment end date

2017-02-18, 1395/11/30

Trial completion date

empty

Scientific title

Effect of proprioceptive exercise and postural training on neck and disability index and neck and shoulder muscles fatigue in female dentists with unspecific neck pain

Public title

Effect of balance exercise and corrective postural training on neck and disability index and neck and shoulder muscles fatigue in dentists with neck pain

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

female dentists aged group 30 to 40 pain scale less than 3 disability index less than 28 Chronic neck pain

Exclusion criteria:

neck or shoulder pain from non-musculature causes undergone cervical spine surgery reported any neurological signs; or had participated in a neck exercise program in the past 12 months

Age

From **30 years** old to **40 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **48**

Actual sample size reached: **48**

Randomization (investigator's opinion)

Randomized

Randomization description

Restricted randomization- The samples will have a number from 1 to 48; and randomly for each group 16 numbers will be selected with the help of computer software.

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

In this project, 48 patients are randomly divided into three groups. The samples will have a number from 1 to 48; and randomly for each group 16 numbers will be selected with the help of computer software.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Iran University of Medical Sciences

Street address

Hemmat Highway, Iran University of Medical Sciences

City

Tehran

Province

Tehran

Postal code

1449614535

Approval date

2016-12-31, 1395/10/11

Ethics committee reference number

IR.IUMS.REC.1395.28922

Health conditions studied

1

Description of health condition studied

Female dentists with unspecific neck pain

ICD-10 code

M62.9

ICD-10 code description

Disorder of muscle, unspecified

Primary outcomes

1

Description

Chronic neck pain

Timepoint

Before intervention and 6 weeks after intervention

Method of measurement

Visual Analog Scale Questionnaire for Neck Pain

2

Description

Muscles fatigue

Timepoint

Before intervention and 6 weeks after intervention

Method of measurement

Median Frequency of Electromyography

3

Description

Disability Index

Timepoint

Before intervention and 6 weeks after intervention

Method of measurement

Neck Pain Disability Index Questionnaire

Secondary outcomes

1

Description

Timepoint

Method of measurement

Intervention groups

1

Description
Intervention 1: Proprioceptive exercises and corrective postural exercises_ The proprioceptive exercises are a retraining program that emphasizes the coordination and maintenance of flexor and extensor muscles of neck and shoulder, according to Joule et al., These exercises are designed to increase the sense and planned for balance And their main focus is on reducing the imbalance of superficial and depth muscles of the neck and shoulder and corrective exercises consist of principles of ergonomics in the work environment in dentistry.
Category
Rehabilitation

2

Description
Intervention 2: Proprioceptive exercises- The proprioceptive exercises are a retraining program that emphasizes the coordination and maintenance of flexor and extensor muscles of neck and shoulder, according to Joule et al., These exercises are designed to increase the sense and planned for balance And their main focus is on reducing the imbalance of superficial
Category
Rehabilitation

3

Description
Control group: group give no intervention
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Zohreh Dental Clinic
Full name of responsible person
Anahita Bolandian
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2

Recruitment center
Name of recruitment center
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice chancellor of research, Iran University of Medical Sciences
Full name of responsible person
Dr Seyed Ali Javad Mousavi
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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
Vice chancellor of research, Iran 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

Iran University of Medical Sciences

Full name of responsible person

Anahita Bolandian

Position

Ph.D. student of corrective exercise and sport injuries

Latest degree

Ph.D.

Other areas of specialty/work

Sport Medicine

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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

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

Informed Consent Form

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

Clinical Study Report

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

Analytic Code

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

Data Dictionary

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