Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

The Effect of Corrective and Swing Exercises on Pain, Pulmonary function of Women with Kyphosis deformity

Protocol summary

Study aim
The Effect of Corrective and Swing Exercises on Pain, Pulmonary function of Women with Kyphosis deformity

Design
This research is of a semi-experimental type with an applied nature and with a pre-test-post-test design including 42 people aged 25 to 40 in three groups (control and two training groups) without blinding. Each study group includes 14 people who In this way, first the pre-test is taken (among the people who have been diagnosed with kyphosis after screening with a checkerboard device and then the degree of kyphosis has been determined using a flexible ruler) and based on the degree A list of kyphosis people is prepared and they are divided into groups.

Settings and conduct
This project will be carried out in the Sports Club of Tan va ravan in Saveh city by a tool called swing for 8 weeks, 3 days a week and each session will last 45 to 60 minutes. No blinding has been done. The swing group will do all its exercises such as warm up The primary and main exercises are done with the swing tool. The corrective exercises group along with the swing exercises first performed 8 different corrective exercises specific to kyphosis, then they continued the exercises with the swing band. The control group did not receive any intervention.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Having a kyphosis greater than 45 degrees Exclusion criteria: not having kyphosis

Intervention groups
3 groups include the control group, the corrective exercises group with swing, and the swing group. The control group does not do any exercises. The second group performs corrective exercises along with the swing, and the third group only performs the swing exercises. All 3 groups before and after Performing the intervention, their lung function is measured through a spirometry device.

Main outcome variables
kyphosis angle; lung function; pain;

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20240318061324N1**
Registration date: **2024-07-03, 1403/04/13**
Registration timing: **registered_while_recruiting**

Last update: **2024-07-03, 1403/04/13**
Update count: **0**

Registration date
2024-07-03, 1403/04/13

Registrant information

Name
Fateme Omidi

Name of organization / entity
Arak University

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Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2024-05-19, 1403/02/30

Expected recruitment end date
2024-07-20, 1403/04/30

Actual recruitment start date
empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effect of Corrective and Swing Exercises on Pain, Pulmonary function of Women with Kyphosis deformity

Public title

The effect of corrective exercises and swing on lung and back hump

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criteria:

Having a kyphosis greater than 45 degrees

Exclusion criteria:

Pregnancy structural kyphosis vertebral fracture Scheuerman

Age

No age limit

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **42**

Randomization (investigator's opinion)

Randomized

Randomization description

A list of individuals with a kyphosis degree greater than 45 degrees is prepared in descending order. Individuals are placed in blocks of three, and a draw is conducted for each block. The first person in each block is placed in the control group, the second person in the swing exercise group, and the third person in the swing exercise with corrective exercises group.

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Other

Other design features

Use swing exercise

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Arak University

Street address

Plate 28، Corner of Koche Bahar Alley, 8 Esteghlal Alley,Esteghlal St.,

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Province

Markazi

Postal code

3913848771

Approval date

2024-03-16, 1402/12/26

Ethics committee reference number

IR.ARAKU.REC.1402.084

Health conditions studied

1

Description of health condition studied

Kyphosis

ICD-10 code

M40.0

ICD-10 code description

Postural kyphosis

Primary outcomes

1

Description

degree of kyphosis

Timepoint

Measuring the degree of kyphosis before training and 8 week after starting training

Method of measurement

A flexible ruler is a tool for measuring the degree of kyphosis of the spine

2

Description

lung function

Timepoint

Measurement of lung volume before training and eight weeks after starting training

Method of measurement

The patient should sit straight and his feet should be completely on the floor. The patient should breathe deeply and fully and tightly close his lips around the mouthpiece. Then blow out as much air as he can quickly and forcefully, so that the lungs are completely empty.In the next step, the air must be drawn into the lungs strongly and completely.

Secondary outcomes

1

Description

pain

Timepoint

Before starting the intervention, 8 weeks after the intervention

Method of measurement

Visual Analog Scale Questionnaire

Intervention groups

1

Description
The first intervention group: swing exercises, A type of open and closed movement chain exercises that has been widely welcomed are body weight resistance exercises, which among the features of these exercises is using the body in an unstable environment, which improves balance, increases flexibility and strength. The face is synchronized. One of the suspended exercise tools is the Swing club tool, which is used in the field of rehabilitation, improvement of structural disorders, reverse therapy and physical activity.Swing is a sports tool that is made of a mattress and six handles, and the fabrics are made of parachute fabric or high resistance fabric, which can be used to perform sports movements in a semi-suspended and fully suspended manner, while Safety will necessarily be created by molding in the mattress so that movements are performed on an unstable surface. The exercises are for 8 weeks, three sessions per week and each session lasts 45 to 60 minutes.
Category
Treatment - Devices

2

Description
The second intervention group: : a combination of corrective and swing exercises,, suspended swing exercises that include a swing and three pairs of short, medium, and long handles. These exercises are mostly reversed and suspended using body weight. And corrective exercises for stretching and strengthening the kyphosis anomaly. The exercises are for 8 weeks, three sessions per week and each session lasts 45 to 60 minutes.
Category
Treatment - Devices

3

Description
Control group: without any training. This group will only participate in pre-test and post-test measurements.
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
Save Medical Sciences
Full name of responsible person
Fateme Omidi
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Arak University
Full name of responsible person
Shahrjerdi shahnaz
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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
University Arak
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
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Shahnaz Shahrjerdi

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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
There is no further information
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