Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Randomized clinical trial evaluating the applicability of remote rehabilitation in patients with lordosis (decrease, increase), kyphosis and scoliosis

Protocol summary

Study aim

The effect of remote rehabilitation in patients with lordosis (increase, decrease), kyphosis and scoliosis.

Design

A clinical trial with an intervention group, using a block randomization method using a sealed envelope using a sealed envelope with website sequence generation on 23 patients for randomization using the Internet and a smartphone with a platform Skype took place.

Settings and conduct

In this study, 46 patients with back pain and chronic neck pain with lordosis (decrease, increase), kyphosis, and scoliosis in a clinical trial method (intervention phase or clinical trial randomly dividing people into two intervention-control groups) who visited in person They will be examined in physiotherapy clinics, they will be divided into two intervention groups (23 people) and control (23 people), it will be done in the center of Qaim Hospital and physiotherapy clinics in Firozabad, Fars.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: 1) Age 20 to 50 years2 ؛) They have disturbances in daily life activities3 ؛) They are associated with the repetition of pain؛ Exclusion criteria: 1) Patients who have central sensitivity to chronic pain and neurological disorders2 ؛) Back and neck surgery patients3 ؛) Patients who are undergoing physiotherapy؛ 4) Spinal amputation patients5 ؛) Patients who have addictions or use painkillers6 ؛) Patients who have neck pain with dizziness7 ؛) Pregnant patients8 ؛) Patients who received therapeutic exercise in the last 3 months.

Intervention groups

In the hyper lordosis intervention group, combined exercises (McKenzie and stabilizer) and hyper lordosis, Williams and stabilizer exercises. In the hypo lordosis control group, hamstring stretching and hyper lordosis straight leg lifting test were suggested.

Main outcome variables

Pain intensity; Functional disability of the back; Functional disability of the neck; Anxiety; Fear of movement.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230206057342N1**
Registration date: **2024-04-18, 1403/01/30**
Registration timing: **retrospective**

Last update: **2024-04-18, 1403/01/30**
Update count: **0**

Registration date

2024-04-18, 1403/01/30

Registrant information

Name

Soheila Yakhchidor

Name of organization / entity

Kerman research assistant

Country

Iran (Islamic Republic of)

Phone

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-04-21, 1401/02/01

Expected recruitment end date

2022-08-23, 1401/06/01

Actual recruitment start date

2021-12-22, 1400/10/01

Actual recruitment end date

2022-08-23, 1401/06/01

Trial completion date

2022-09-21, 1401/06/30

Scientific title

Randomized clinical trial evaluating the applicability of remote rehabilitation in patients with lordosis (decrease, increase), kyphosis and scoliosis

Public title

Randomized clinical trial evaluating the applicability of remote rehabilitation in patients with lordosis (decrease, increase), kyphosis and scoliosis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

The age of the patients is 20 to 50 years. Patients who have disorders in daily life activities. Patients who have lordosis (decrease, increase), kyphosis and scoliosis and are associated with repeated pain.

Exclusion criteria:

Age

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

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **46**

Actual sample size reached: **46**

Randomization (investigator's opinion)

Randomized

Randomization description

The number of 46 patients suffering from back pain and chronic neck pain with lordosis (decrease, increase), kyphosis and scoliosis referring to the hospital affiliated to Shiraz University of Medical Sciences (Qaim Hospital Center and Physiotherapy Clinics in Firozabad Fars) with entry, selection and randomly in two intervention groups, by block randomization method using sealed envelopes with website sequence generation on 23 patients for randomization using internet and smartphone with Skype platform and control group (23 the patient) are divided.

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Other

Other design features

According to the search strategy carried out in Web OF Science and Pubmed databases, it is possible that there is no remote rehabilitation method for patients with lordosis (increase, decrease), kyphosis and scoliosis with Skype and other media. It's not done.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of kerman University of Medical Sciences

Street address

In front of Baath Clinic,Tahmasababad intersection.

City

Kerman

Province

Kerman

Postal code

7613753767

Approval date

2022-04-16, 1401/01/27

Ethics committee reference number

IR.KMU.REC.1401.042

Health conditions studied

1

Description of health condition studied

Kyphosis and lordosis, Scoliosis

ICD-10 code

M40 ,M41

ICD-10 code description

Kyphosis and lordosis ,Scoliosis

Primary outcomes

1

Description

Intensity of pain

Timepoint

At the beginning, 14 days and 3 months after starting sports training.

Method of measurement

Visual pain scale questionnaire

2

Description

Functional disability of the back

Timepoint

At the beginning, 14 days and 3 months after starting sports training

Method of measurement

Oswestry questionnaire

3

Description

Functional disability of the neck

Timepoint
At the beginning, 14 days and 3 months after starting sports training
Method of measurement
Northwick Park pain questionnaire

4

Description
Fear of movement
Timepoint
At the beginning and at the end of the study
Method of measurement
Patient's fear of movement questionnaire

5

Description
anxiety
Timepoint
At the beginning and at the end of the study
Method of measurement
Patient anxiety questionnaire

Secondary outcomes

1

Description
1- Decreased activity level and quality of life
Timepoint
1- At the beginning of the study, 2 weeks and 3 months later
Method of measurement
1- "Oswestry 10-question questionnaire, Northwick Park 9-question pain questionnaire and visual pain scale"

2

Description
2- Daily life activities
Timepoint
2- At the beginning of the study, 2 weeks and 3 months later
Method of measurement
2- "10-question Oswestry questionnaire, 9-question North Wake Park pain questionnaire and visual pain scale"

3

Description
3-Injury or avoidance of accompanying activity
Timepoint
3- At the beginning and end of the study
Method of measurement
3- "Questionnaire of 11 questions of fear of movement"

4

Description
4- Functional injuries at work
Timepoint
4- At the beginning and end of the study
Method of measurement
4- "7-Questionnaire of Anxiety"

Intervention groups

1

Description
1-Exercises for the patients of "neck lordosis reduction control group" neck muscle training + resistance exercises" and "shoulder raising exercise" and "lateral tilting of the head" and "neck muscle stretching exercises". 2- Exercises for the patients of "kyphosis control group" Stretching exercise of the corner of the wall". 3- Exercises of the patients of "neck forward control group", "Stretching exercises". 4- Exercises of the patients of "Control group of scoliosis patients", "Strengthening exercises". 5- Exercises of the patients of "Lordosis reduction intervention group" "Stabilizing exercises + Mackenzie neck exercises". 6- "Kyphosis intervention group" exercises, "Superman exercises". 7- Exercises for the patients of "frontal neck intervention group", "stabilizing exercises + chin tuck + lateral neck exercises". 8- Exercises for "Scoliosis Intervention Group" patients, "Stretching exercises for scoliosis patients, the patient sleeps on the convex side, puts a pillow under the convex arch, raises the hand on the concave side above his head". 9- Exercises for the patients of "intervention group to reduce lumbar lordosis", "stabilizing exercises + McKenzie exercises" 10- Exercises for patients of "intervention group for increasing lumbar lordosis", "Williams exercises + stabilizer".
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Ghaem Firozabad Fars Hospital
Full name of responsible person
Research assistant
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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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
Faculty of Management and Information - Kerman 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
Kerman University of Medical Sciences
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Soheila yakhchidor
Position
Student
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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

Only part of the pain intensity and functional disability data

When the data will become available and for how long

A few months after the results were published

To whom data/document is available

Only for tutors and advisors and students

Under which criteria data/document could be used

Due to the conditions of patients with excessive lordosis (increase and decrease) of lumbar depression, kyphosis (hunchback) and scoliosis, lateral deviation of the spine for the effect of performing combined exercises, stabilization exercises, McKenzie and Williams exercises, etc., emphasis on doing exercises inside Abdominal stretching, stretching-resistance exercises, etc., were performed by physiotherapists at the patient's bedside in the physiotherapy and rehabilitation area. Due to the conditions of the patients, lordosis (increase and decrease) excessive lumbar depression, kyphosis (hunchback) and scoliosis lateral deviation of the spine for the effect of performing combined exercises, stabilization exercises, Mackenzie and Williams exercises, people who are prone and have the conditions to receive such a disease . With the physiotherapists Ahmed Mehrabi, Maryam Taheri, Bahram Jafari, who intervened with the patients in this thesis, and also with the advice of other physiotherapists in all the physiotherapy hospitals and clinics of the country, and with the authorization of spine imaging after the examination of the patients And giving these exercises to patients in all parts of the country will solve the problems of the patients.

From where data/document is obtainable

Physiotherapist: Ahmed Mehrabi Firouzabad, Borujerdi Street, Imam Khomeini South Street, alley next to Tejarat Bank. Next to the Language Institute Stamp number: 1 Floor: 1 Unit: 1 For the effect of combined exercises given to patients by a physiotherapist.

What processes are involved for a request to access data/document

In order to view the report of this research after sending the request, the research assistant of Kerman University of Medical Sciences will follow up and inform.

Comments