

Clinical Trial Protocol

Iranian Registry of Clinical Trials

18 Sep 2026

Investigating the effect of correcting the working posture of carpet weaving women to reduce the pressure load of the lumbar region and skeletal-muscular disorders

Protocol summary

Study aim

Investigating the effect of working posture correction on compressive load and skeletal-muscular discomforts among women carpet weavers.

Design

Clinical trial of cluster random allocation of intervention and control groups, with unblinded parallel groups with 186 participants, simple randomization using R software.

Settings and conduct

Between the public workshops of Yazd city, carpet weavers who are entered the study will complete the demographic form. Tasks are identified using the HTA and inappropriate postures using the REBA. The level of skeletal-muscular discomfort is determined with the LPD and determine the compressive load of the lumbar region with 3DSSPP. The correct postures are recognized by the research team and then during a two-hour training workshop (14 days), the researchers teach them. After 6 months, monitoring of carpet weavers, REBA, LPD and 3DSSPP re-evaluations will be done every 2 months to ensure correct posture. The pressure load on L4/L5 and L5/S1 intervertebral discs is calculated before and after the intervention.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Female gender Exclusion criteria: suffering from musculoskeletal diseases

Intervention groups

The intervention group includes women weavers who have at least one year experience in carpet weaving and do not have musculoskeletal disease before and after starting work, ergonomic intervention to correct posture with the help of teaching the correct way to sit and the position of the organs during work and ergonomic intervention (fabric shoulder support and more mobility). The control group includes female weavers who have at least one year of carpet weaving experience and do not have musculoskeletal disease before or after starting

work, and do not receive any intervention.

Main outcome variables

Compressive load of the lumbar and skeletal-muscular disorders and the score of REBA

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230715058783N1**

Registration date: **2023-12-08, 1402/09/17**

Registration timing: **registered_while_recruiting**

Last update: **2023-12-08, 1402/09/17**

Update count: **0**

Registration date

2023-12-08, 1402/09/17

Registrant information

Name

Nikoo Jabari

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 35 3834 1650

Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-11-06, 1402/08/15

Expected recruitment end date

2024-06-04, 1403/03/15

Actual recruitment start date

empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Investigating the effect of correcting the working posture of carpet weaving women to reduce the pressure load of the lumbar region and skeletal-muscular disorders

Public title
The effect of correcting posture on the compressive load of the lumbar.

Purpose
Prevention

Inclusion/Exclusion criteria
Inclusion criteria:
Female gender Carpet weavers who have at least one year of experience
Exclusion criteria:
Having musculoskeletal disorders before work Having a musculoskeletal complication caused by an accident Suffering from chronic musculoskeletal diseases (muscle wear, disc herniation and scoliosis) Suffering from underlying neuropathy diseases (diabetes, rheumatoid arthritis and lupus, gout and arthritis) Having mental illnesses (depression) Being on menses (due to bias in self-report of discomfort)

Age
From **18 years** old to **50 years** old

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **186**

Randomization (investigator's opinion)
Randomized

Randomization description
Because the intervention type of this study is educational; To ensure that the control group does not receive educational content, the people of the control group should be selected from other workplaces (unrelated to the people of the intervention group). Based on this, we will benefit from the cluster randomization method using R version 4.3.1 software to select 5 workplaces as the intervention group and 5 workplaces as the control group.

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Kerman University of Medical Sciences

Street address

University of Medical Sciences campus, Haft Bagh Alavi Ave., Kerman

City

Kerman

Province

Kerman

Postal code

7616913555

Approval date

2023-10-08, 1402/07/16

Ethics committee reference number

IR.KMU.REC.1402.236

Health conditions studied

1

Description of health condition studied

Musculoskeletal discomfort and pressure load in the lumbar region

ICD-10 code

Z87.3

ICD-10 code description

Personal history of diseases of the musculoskeletal system and connective tissue

2

Description of health condition studied

Low back pain

ICD-10 code

M54.5

ICD-10 code description

Low back pain

Primary outcomes

1

Description

The amount of compressive load of the lumbar area in the 3D Static Strength Prediction Program

Timepoint

Before the start of the intervention, 2, 4 and 6 months after the start of the intervention

Method of measurement

3D Static Strength Prediction Program

2

Description

Comparison of posture scores in two intervention and control groups

Timepoint

Before the start of the intervention, 2, 4 and 6 months after the start of the intervention

Method of measurement

Rapid Entire Body Assessment

Secondary outcomes

1

Description

The amount of musculoskeletal discomfort in different areas of the body

Timepoint

Before the start of the intervention, 2, 4 and 6 months after the start of the intervention

Method of measurement

Local Situational Discomfort

Intervention groups

1

Description

In this study, educational intervention will be done. In this way, to correct the posture of carpet weavers, educational workshops will be given to the intervention group of carpet weavers for 14 days. The educational content includes training on correcting the body posture during work and how to support the shoulder and back with easy and accessible aids (such as the use of fabric bandages) and training on more mobility due to the nature of the carpet weaving job, which is sedentary. Also, in ergonomic training workshops, the benefits of correct posture during carpet weaving and increasing physical activity (such as walking in free time) will be explained.

Category

Prevention

2

Description

Control group: The control group will not receive training until the end of the study (6 months) and after completing data collection (data related to dependent variables: discomfort, whole body posture score, and compressive load between intervertebral discs), They receive ergonomic training to comply with the ethical beneficence principle.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Carpet weaving workshops in Yazd city

Full name of responsible person

Mohamad Hossein Mirjalili

Street address

No. 1; Hashem Khan St.; Shahid Rajaei Ave.; Yazd

City

Yazd

Province

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8913667369

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Kerman University of Medical Sciences

Full name of responsible person

Abedin Iranpour

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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

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

Full name of responsible person

Mostafa Mohammadian

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Ergonomics

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Person responsible for scientific inquiries

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Person responsible for updating data

Contact

Name of organization / entity

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Full name of responsible person

Nikoo Jabari

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is 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

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

All data is potentially shareable after de-identifying individuals

When the data will become available and for how long

1 month after published the results

To whom data/document is available

Only for researchers working in academic and scientific institutions

Under which criteria data/document could be used

Non

From where data/document is obtainable

Nikoo Jabari Email: j.nikoo@yahoo.com Phone number: 09134549046

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

Applicants for documents will receive the documents as soon as possible if they send an email to Mrs. Nikoo Jabari

Comments