

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

04 Jul 2026

### Assessment of the effect of ergonomics training on the musculoskeletal disorders and sleep disorders in nurses

#### Protocol summary

##### Study aim

Determining the effect of training ergonomic principles on the musculoskeletal disorders and sleep disorders in nurses.

##### Design

A randomized controlled trial with a follow-up period, with parallel groups, on 120 nurses and paramedics working in two public hospitals, one hospital will be selected as a control and the other as an intervention by lottery.

##### Settings and conduct

This study will be conducted in selected hospitals of Bushehr city. Training for the intervention group will be provided in two phases, offline and in-person. The duration of the educational intervention will be 1 month and the follow-up period will be 3 months.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: Samples must be nursing staff consisting of nurses (bachelor's degree, master's degree, doctorate in nursing) and nurse's assistant (diploma degree); The samples must have informed consent to participate in the research; Samples have at least one musculoskeletal disorder with a score of 30 or higher; Samples must be under 55 years of age. Exclusion criteria: Those who are nursing managers; Those who are pregnant; Those who are menopausal; Those who are Participating in the same courses at the same time.

##### Intervention groups

Intervention group: The samples in the intervention group will be trained in ergonomic principles. The ergonomic principles training course will be held in the form of 4 offline sessions and 4 face-to-face sessions, the duration of each session will be 120 minutes, for 1 month. The educational content presented in the offline sessions will also be presented in the face-to-face sessions. The control group will not receive any training during the intervention.

##### Main outcome variables

Musculoskeletal Disorders, sleep disorders

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20090522001930N5**

Registration date: **2022-09-16, 1401/06/25**

Registration timing: **prospective**

Last update: **2022-09-16, 1401/06/25**

Update count: **0**

##### Registration date

2022-09-16, 1401/06/25

##### Registrant information

##### Name

Hakimeh Vahedparast

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 77 1252 8498

##### Email address

h.vahedparast@bpums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2022-10-07, 1401/07/15

##### Expected recruitment end date

2023-03-20, 1401/12/29

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Assessment of the effect of ergonomics training on the musculoskeletal disorders and sleep disorders in nurses

**Public title**

Assessment of the effect of ergonomics training in nurses

**Purpose**

Supportive

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

Samples must be nursing staff consisting of nurses (bachelor's degree, master's degree, doctorate in nursing) and nurse's assistant (diploma degree) The samples must have informed consent to participate in the research Samples have at least one musculoskeletal disorder with a score of 30 or higher Having at least one year of clinical work experience Samples must have a smart phone or PC or tablet Samples must have internet access Samples must be under 55 years of age

**Exclusion criteria:**

Those who are nursing managers (matron, supervisor and head nurse) Those who are pregnant Those who are menopause Those who are Participating in the same courses at the same time

**Age**

From **19 years** old to **55 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **120**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

There are only two general hospitals with similar wards in Bushehr city. These two hospitals will be randomly placed in intervention and control groups. Randomization will be done by lottery method. In order to lottery, the name of each hospital will be written on a separate piece of paper and placed inside an envelope. someone outside the research team will be asked to randomly take out the names of the hospitals from the envelope. The name of the first hospital that came out of the envelope will be chosen as the intervention group and the second hospital 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 Bushehr University of Medical Sciences

**Street address**

Pardis Complex Bushehr University of Medical Sciences, Salman Farsi Street, Sabz Abad Blvd, Bahmani, Bushehr

**City**

Bushehr

**Province**

Boushehr

**Postal code**

7518759577

**Approval date**

2022-08-01, 1401/05/10

**Ethics committee reference number**

IR.BPUMS.REC.1401.061

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

Musculoskeletal Disorders

**ICD-10 code**

M95.8

**ICD-10 code description**

Other specified acquired deformities of musculoskeletal system

**2****Description of health condition studied**

sleep disorders

**ICD-10 code**

G47.01

**ICD-10 code description**

Insomnia due to medical condition

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

Musculoskeletal Disorders

**Timepoint**

Before the intervention and 3 months after the intervention

**Method of measurement**

The Cornell Musculoskeletal Disorders Questionnaire, which has 54 items and 3 domains, the 3D static strength prediction program, version 6, and Rapid entire body assessment (REBA) checklist, which has 5 levels of priority for corrective action, will be used.

## Secondary outcomes

### 1

#### Description

sleep disorders

#### Timepoint

Before the intervention and 3 months after the intervention

#### Method of measurement

The Pittsburgh sleep quality questionnaire with a 4-part Likert scale will be used.

## Intervention groups

### 1

#### Description

Intervention group: The content of ergonomic principles training includes 4 parts. The titles of each section are as follows: 1- Getting to know the goals, knowing the science of ergonomics and workstation and equipment arrangement 2- How to perform job duties in the correct way 3- Musculoskeletal disorders 4- Pain management. The content (four two-hour sessions) will be uploaded to SalamoZ website specifically designed for this purpose 2 weeks before the class began, and the samples will be asked to study the full course content within 2 weeks. Due to the interactive design of the website, the samples access it as users at any time and place by connecting to the Internet with their smartphones, Also The researchers can quickly check the latest follow-up status by the samples from the management panel. The educational content is then presented in the form of four two-hour sessions during 2 weeks. The researcher briefly will be explained the lesson plan and the learning objectives at the onset of the class and will be summarized the main concepts of the lesson at the end. The clinical scenarios related to the concepts, entitled as ergonomic principles, are presented in the classroom. Afterwards, each will be asked to speak about the scenario and answer the questions, discuss them with researcher and other samples during the classroom, and analyze and answer the questions related to the clinical scenarios. There is a pre-test and a post-test 3 months later.

#### Category

Rehabilitation

### 2

#### Description

Control group: The samples will not receive any training during the study. There is a pre-test and a post-test 3 months later.

#### Category

N/A

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Bushehr University of Medical Sciences, Shohadaye Khalije Fars hospital

##### Full name of responsible person

Aynaz Daftari

##### Street address

Shohadaye Khalije Fars hospital, Taleghani Boulevard, Bushehr

##### City

Bushehr

##### Province

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##### Postal code

7517933755

##### Phone

+98 933 221 0954

##### Email

aynazdaftari7580@gmail.com

### 2

#### Recruitment center

##### Name of recruitment center

Salman Farsi hospital (Tamin Ejtemayi )

##### Full name of responsible person

Aynaz Daftari

##### Street address

Salman Farsi hospital, Salman Farsi Street, Sabz Abad Blvd, Bahmani, Bushehr

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##### Province

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##### Phone

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##### Email

aynazdaftari7580@gmail.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Boushehr University of Medical Sciences

##### Full name of responsible person

Akram Farhadi

##### Street address

Deputy of research and technology, Pardis Complex Bushehr University of Medical Sciences, Salman Farsi Street, Sabz Abad Blvd, Bahmani, Bushehr

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##### Province

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**Email**

ak.farhadi@gmail.com

**Grant name**

**Grant code / Reference number**

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

No

**Title of funding source**

Bushehr 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**

Bushehr University of Medical Sciences

**Full name of responsible person**

Hakimeh Vahedparast

**Position**

Associate Professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Nursery

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## Person responsible for scientific inquiries

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## Person responsible for updating data

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**Position**

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**Latest degree**

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**Other areas of specialty/work**

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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