

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jun 2026

Investigating The Effects of Ergonomic Training Interventions Based on Precede-Proceed Model on musculoskeletal disorders And Stress In Surgical Technologists

Protocol summary

Study aim

Investigating The Effects of Ergonomic Training Interventions Based on Precede-Proceed Model on musculoskeletal disorders And Stress In Surgical Technologists

Design

Clinical trial with Control Group, without Blinding or Randomization, on 68 individuals.

Settings and conduct

This semi-experimental study using an interrupted time series design will be done in surgical technologists of Yazd teaching hospitals by census method. The intervention program is based on the precede-proceed model and Data collection will be done using Rapid whole body assessment technique (REBA), modified Nordic, perceived stress and behavioral factor questionnaire.

Participants/Inclusion and exclusion criteria

Inclusion criteria: more than one year of work experience, willingness to participate in the study.
Exclusion criteria: having a history of surgery or any accident that affects the musculoskeletal area.

Intervention groups

The intervention program is based on the Precede-Proceed model and includes 5 training sessions according to ergonomic principles and 2 training sessions on stress coping techniques based on the Lazarus interactive model. No intervention is performed in the control group.

Main outcome variables

to Improve the job performance of Operating Room Staff and Surgeons; reduce Stress and Musculoskeletal Disorders and design an educational program based on the Precede-Proceed model, To create and Reinforcement the principles of ergonomics during work in Surgical Technologists.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230422057974N1**

Registration date: **2023-07-07, 1402/04/16**

Registration timing: **prospective**

Last update: **2023-07-07, 1402/04/16**

Update count: **0**

Registration date

2023-07-07, 1402/04/16

Registrant information

Name

Mozhgan Amiri

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 26 3455 3193

Email address

mozghanamiri2345@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-12-10, 1402/09/19

Expected recruitment end date

2024-12-09, 1403/09/19

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Investigating The Effects of Ergonomic Training Interventions Based on Precede-Proceed Model on musculoskeletal disorders And Stress In Surgical Technologists

Public title

Investigating The Effects of Ergonomic Training Interventions Based on Precede-Proceed Model on musculoskeletal disorders And Stress In Surgical Technologists

Purpose

Education/Guidance

Inclusion/Exclusion criteria

Inclusion criteria:

Having more than one year of work experience as a surgical technologist Desire to participate in the study

Exclusion criteria:

Having a history of surgery or any accident that affects the musculoskeletal area

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 68

Randomization (investigator's opinion)

Not randomized

Randomization description

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 Health Faculty - Shahid Sadougi University of Medical Sciences, Yazd

Street address

Yazd Faculty of Health, Pardis of Shahid Sadoughi University of Medical Sciences and Health Services, Shohada Anonymous Blvd, Alam Square

City

Yazd

Province

Yazd

Postal code

8915173160

Approval date

2023-06-17, 1402/03/27

Ethics committee reference number

IR.SSU.SPH.REC.1402.033

Health conditions studied

1

Description of health condition studied

Musculoskeletal Disorders

ICD-10 code

ICD-10 code description

2

Description of health condition studied

Stress

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Leveling the risk of not doing ergonomic work based on the Rapid Entire Body Assessment method

Timepoint

Risk stratification based on the Rapid Entire Body Assessment method before the intervention, 3 months and 6 months after the intervention

Method of measurement

Rapid Entire Body Assessment body condition assessment checklist

Secondary outcomes

1

Description

Predisposing factors score

Timepoint

Before the start of the intervention, 3 and 6 months after the intervention

Method of measurement

The questionnaire of behavioral factors will be designed based on the precede - proceed model.

2

Description

Enabling factors score

Timepoint

Before the start of the intervention, 3 and 6 months after the intervention

Method of measurement

The questionnaire of behavioral factors will be designed based on the asked-asked model.

3

Description

Enhancing factors score

Timepoint

Before the start of the intervention, 3 and 6 months after the intervention

Method of measurement

The questionnaire of behavioral factors will be designed based on the asked-asked model.

4

Description

Behavior score

Timepoint

Before the start of the intervention, 3 and 6 months after the intervention

Method of measurement

The questionnaire of behavioral factors will be designed based on the asked-asked model.

Intervention groups

1

Description

Intervention group: Seven face-to-face training sessions will be held for surgical technologists. The duration of each seven sessions is 2 to 2.5 hours and the training will include theoretical and practical components. The first session is an introduction to the concepts of predisposing factors - knowledge with the following topics: What is ergonomics? What is workplace syndrome? What is musculoskeletal disorder? What is stress? In the second session, predisposing attitudinal factors will be discussed and people's attitude towards factors affecting musculoskeletal disorders and the effectiveness of preventive behaviors will be presented. Enabling factors will be introduced in the third and fourth sessions. These items include: the use of educational programs to prevent skeletal diseases, teaching appropriate exercises to prevent musculoskeletal disorders and reduce stress, ergonomic principles in purchasing ergonomic aids for the workplace (introduction of equipment, application, importance of use and desired organs) and the principles of correct body posture during work. The fifth session will be a review of the materials presented in the previous sessions. Also, training related to stress based on Lazarus and Folkman's interactive model of dealing with stress will be conducted in the sixth and seventh sessions.

Category

Behavior

2

Description

Control group: There is no intervention in the control group.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Shahid Sadoughi Hospital

Full name of responsible person

Mozhgan Amiri

Street address

Ibn Sina Street, Shahid Qandi Boulevard, Safaiyeh

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<https://web.ssu.ac.ir/index.aspx?lang=1&sub=16>

2

Recruitment center

Name of recruitment center

Shahid Dr Rahnamun Hospital

Full name of responsible person

Mozhgan Amiri

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Web page address

<https://web.ssu.ac.ir/i/index.aspx?lang=1&sub=4>

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Yazd University of Medical Sciences

Full name of responsible person

Doctor Alireza Moradi

Street address

Vice President of Research and Technology of Shahid Sadoughi University of Medical Sciences Yazd, Imam Reza (AS) Research Educational Complex, the beginning of Student Blvd, Imam Hossein (AS) Square

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<https://web.ssu.ac.ir/index.aspx?lang=1&sub=21>
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Yazd 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
Yazd University of Medical Sciences
Full name of responsible person
Mozhgan Amiri
Position
Master's student in operating room technology
Latest degree
Bachelor
Other areas of specialty/work
Others
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Person responsible for updating data

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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
No - There is not 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

Not applicable

Title and more details about the data/document

All data can be shared after de-identifying individuals.

When the data will become available and for how long

The access period starts 6 months after the results are published

To whom data/document is available

All people, including researchers working in academic

and scientific institutions, industry, etc., will be allowed to access the data.

Under which criteria data/document could be used

There are no special conditions.

From where data/document is obtainable

Mozhgan Amiri's email address:
mozhganamiri2345@gmail.com

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

Applicants should submit their application through the mentioned email, then their application will be processed as soon as possible.

Comments