Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

The effect of regular sports activities on the level of stress and job productivity among the employees of Bakhtar Regional Electric Company in Arak city.

Protocol summary

Study aim

1. The effectiveness of regular sports activities on the level of occupational stress in the employees of Bakhtar Regional Electric Company of Arak city. 2. The effectiveness of regular sports activities on the level of job productivity in the employees of Bakhtar Regional Electric Company of Arak

Design

A clinical trial with a control group, with a parallel group, a blinded, randomized, on 148 participants will be used for randomization.

Settings and conduct

The place of the study will be the laboratory of Arak University. This study used a randomized controlled trial (RCT) design. The d data analyst was blinded.

Participants/Inclusion and exclusion criteria

Entry requirements for participants: Employees employed in Bakhtar Electricity Company with at least 6 month of experience No smoking Non-entry conditions: Using drugs that affect stress Existence of acute medical conditions and severe injury and physical limitation Disability and disability to participate in sports activities Pregnancy in female employees

Intervention groups

Intervention group: The exercise program included a combination of aerobic exercises and strength exercises to address cardiovascular fitness and muscle strength. Exercises were performed four sessions a week for 12 weeks. Each session consisted of 95 minutes of training, which was provided outside working hours. Participants warmed up for 10 minutes. In each session, the participants performed 45 minutes of moderate-intensity aerobic exercise, 20 minutes of high-intensity exercise, and 15 minutes of strength training to strengthen the muscles of large groups, central stability exercises, and functional exercises. At the end, 5 minutes of cooling exercises were performed. Control group: without structured sports intervention

Main outcome variables

Job stress work productivity

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20181228042157N2**
Registration date: **2023-12-29, 1402/10/08**
Registration timing: **registered_while_recruiting**

Last update: **2023-12-29, 1402/10/08**
Update count: **0**

Registration date

2023-12-29, 1402/10/08

Registrant information

Name
Zeinab Mondalizadeh

Name of organization / entity
Arak University

Country
Iran (Islamic Republic of)

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+98 86 3417 3492

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z-mondalizade@araku.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-12-11, 1402/09/20

Expected recruitment end date

2024-03-10, 1402/12/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of regular sports activities on the level of stress and job productivity among the employees of Bakhtar Regional Electric Company in Arak city.

Public title

The effect of regular sports activities on the level of stress and job productivity among the employees of Bakhtar Regional Electric Company in Arak city.

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Employees employed in Bakhtar Electricity Company with at least 6 months of employment experience No smoking Not taking drugs that affect physical and mental abilities. Not having illness, severe injury or physical limitation Non-participation of the subject in continuous sports training in the last 3 months Fill out the informed consent form

Exclusion criteria:

The use of effective judgment on the level of stress among employees Existence of acute medical conditions and severe injury or physical limitation Disability and disability to participate in sports activities

Age

From **20 years** old to **55 years** old

Gender

Male

Phase

N/A

Groups that have been masked

- Data analyser

Sample size

Target sample size: **74**

Randomization (investigator's opinion)

Randomized

Randomization description

We will use a block randomization method. The randomization unit is the employees. To ensure the unbiased allocation of participants, the randomization process was done by lottery. Participants who met the inclusion criteria were placed in two intervention groups or control groups. Allocation concealment was implemented using sequentially numbered, opaque, and sealed envelopes. Each envelope contained a sheet showing the group assignment. Before the study, all envelopes were prepared and sealed by an independent researcher who was not involved in participant recruitment or data collection. After obtaining informed consent, participants were enrolled in the study and envelopes were opened sequentially to determine group assignment. Participants were then informed about their assigned group. The procedure was conducted by a researcher who was not involved in the recruitment or assessment of participants.

Blinding (investigator's opinion)

Single blinded

Blinding description

The data analyst will be blinded to the fact that the data will be available to her in the form of code.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

کمیته تخصصی اخلاق در پژوهش های زیست پزشکی

Street address

Arak University, Basij Square, Karbala Blvd

City

Arak

Province

Markazi

Postal code

۳۸۴۸۱۷۷۵۸۴

Approval date

2023-09-13, 1402/06/22

Ethics committee reference number

IR.ARAKU.REC.1402.057

Health conditions studied

1

Description of health condition studied

stress and work productivity

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

job stress

Timepoint

One week after the end of the intervention

Method of measurement

Perceived Stress Scale (PSS)

2

Description

work productivity

Timepoint

One week after the end of the intervention

Method of measurement
Endicott work productivity scale (EWPS)

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: The exercise program included a combination of aerobic exercises and strength exercises to address cardiovascular fitness and muscle strength. Exercises were performed four sessions a week for 12 weeks. Each session consisted of 95 minutes of training, which was provided outside working hours. Participants warmed up for 10 minutes. In each session, the participants performed 45 minutes of moderate-intensity aerobic exercise, 20 minutes of high-intensity exercise, and 15 minutes of strength training to strengthen the muscles of large groups, central stability exercises, and functional exercises. At the end, 5 minutes of cooling exercises were performed. It should be noted that these exercises were changed in a personalized way by the trainer depending on the preparation of each person and were performed uniquely for each person.
Category
Lifestyle

2

Description
Control group: The control group was without structured sports intervention.
Category
Lifestyle

Recruitment centers

1

Recruitment center
Name of recruitment center
Bakhtar Electric Company
Full name of responsible person
Milad Farzmehr
Street address
Arak Industrial Town, Atlasi II Square, Mikhak St
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Markazi
Postal code
1954731113
Phone
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Email
Info@bakhtarmoshaver.ir
Web page address
http://www.brec.ir/

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Arak University
Full name of responsible person
Zeinab Mondalizadeh
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Sardasht, Arak University
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Phone
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Email
z-mondalizade@araku.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Bakhtar Electric Company
Proportion provided by this source
100
Public or private sector
Private
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Industry

Person responsible for general inquiries

Contact
Name of organization / entity
Arak University
Full name of responsible person
Zeinab Mondalizadeh
Position
Assisstant professor
Latest degree
Ph.D.
Other areas of specialty/work
Others
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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 information to publish it.

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

Not applicable

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Not applicable