

Clinical Trial Protocol

Iranian Registry of Clinical Trials

28 Jun 2026

The effect of Corrective Approach on Hyper Kyphosis, Forward Head Posture Correction, Increased Postural Sways and Respiratory Function of Students

Protocol summary

Study aim

Comparison of the Effectiveness of Two NASM and Sahreman Approaches on Modification of Hyperkyphosis, Front Rupture and Increased Postural Fluctuation in Male Students of Razi University

Design

Randomized control trial- two parallel groups-three blinded

Settings and conduct

The study will be conducted at the Razi University Sports Rehabilitation Laboratory In this randomized, three-blind randomized trial, 30 male students who participated in physical examinations of the University Health Center who had kyphosis with headache were randomly assigned to two NASM training groups (Random number generator). N = 15 and the Sahrman approach training group (n = 15). In the pre-test and post-test phase, outcome measures will be assessed.

Participants/Inclusion and exclusion criteria

18-22 years, kyphosis > 45 ° and forward head > 49 °, no spinal fracture, no bone and joint disease. Exclusion criteria included another regular training participating, physical disabilities, cardiovascular disease, diabetes, balance problems, and neuromuscular disorders.

Intervention groups

Group 1: Eight weeks, three sessions per week, and one hour of NASM approach training, will be executed: First, we perform the inhibitory exercises and then the stretching exercises on the shortened and tightness muscles. Then, during the activation phase: we strengthen the weak and elongated muscles, and finally perform the integrated exercises. Group 2 Sahrman: Strength training will be performed in the form of 70% to 80% of subjects' cognitive ability and based on the Borg Exercise Intensity scale of 10-12.

Main outcome variables

the kyphosis angle will be measured by a spinal mouse,

the head angle will be measured by Autocad software, and the evaluation of foot pressure and postural sways by the PT-Scann device. and respiratory function will be measured by spirometer.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190426043377N2**

Registration date: **2020-03-29, 1399/01/10**

Registration timing: **retrospective**

Last update: **2020-03-29, 1399/01/10**

Update count: **0**

Registration date

2020-03-29, 1399/01/10

Registrant information

Name

Farzaneh Gandomi

Name of organization / entity

دانشگاه رازی

Country

Iran (Islamic Republic of)

Phone

+98 83 3428 3272

Email address

gandomi777@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-01-21, 1398/11/01

Expected recruitment end date

2020-02-20, 1398/12/01

Actual recruitment start date

2020-01-21, 1398/11/01

Actual recruitment end date

2020-02-20, 1398/12/01

Trial completion date

2020-05-21, 1399/03/01

Scientific title

The effect of Corrective Approach on Hyper Kyphosis, Forward Head Posture Correction, Increased Postural Sways and Respiratory Function of Students

Public title

The effect of Corrective Approach on Hyper Kyphosis and Forward Head Posture of Students

Purpose

Other

Inclusion/Exclusion criteria**Inclusion criteria:**

18-22 old range kyphosis > 45 forward head >49 without any spine fracture without any shoulder and neck joint disease no participated in any treatment training 6 months ago

Exclusion criteria:

participated in other training physical disability heart disease neuromuscular and balance disease

Age

From **18 years** old to **22 years** old

Gender

Male

Phase

3

Groups that have been masked

- Participant
- Investigator
- Data analyser

Sample size

Target sample size: **30**

Actual sample size reached: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

To allocate participants to the research groups, a computerized list of random numbers was assigned to randomly assign the subjects to individual blocks (2, 4, 6, 8) using SPSS software. Participants are then assigned by a research team member who is not involved with the 1: 1 allocation ratio in the training groups.

Blinding (investigator's opinion)

Triple blinded

Blinding description

The allocation sequence is concealed by opaque envelopes numbered sequentially, and letter envelopes are opened only after all initial and baseline assessments of the participants have been completed. The random allocation sequence is performed by a study contributor who is not involved in the evaluations and remains hidden from the evaluators and other research partners. Due to the nature of the study evaluator is blinded to the division of participants into groups, participants and the statistical expert and evaluator are also blinded to the

division of participants into groups.

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

RAZI University

Street address

Baghe Abrisham

City

Kermanshah

Province

Kermanshah

Postal code

6714414874

Approval date

2020-01-28, 1398/11/08

Ethics committee reference number

IR.RAZI.REC.1298.006

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

increased kyphosis and forward head posture

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

kyphosis-forward head posture

Timepoint

pre interventions and one day after finished interventions

Method of measurement

laboratory

Secondary outcomes**1****Description**

foot pressure, postural sways, range of motion, muscle strength, respiratory function

Timepoint

pre interventions and one day after finished

interventions
Method of measurement
laboratory

Intervention groups

1

Description

Intervention group: NASM Intervention carried out for 8-week three sessions and for 60 minutes. first self-resales training then stretching exercises and subsequently activation and integrated exercise will be executed. foam roller, tubing bands with various resistance, gem ball, butterfly tubing, various weight dumbbell, massage balls,... are used.

Category

Rehabilitation

2

Description

Intervention group: sahrmann training: Intervention carried out for 8-week three sessions and for 60 minutes per session. for forward head posture, we focused on deep neck flexors strengthening. for kyphosis, we focused on trunk extensors strengthening. strengthening and hypertrophy was done by tranand, various weight dumbbell and body weight.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

RAZI University Health Center

Full name of responsible person

Saber Baigi

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Razi university

Full name of responsible person

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Email

Grant name

Farzad Vaisi

Grant code / Reference number

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

Yes

Title of funding source

Razi university

Proportion provided by this source

10

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

RAZI University

Full name of responsible person

farzaneh gandomi

Position

faculty member

Latest degree

Ph.D.

Other areas of specialty/work

corrective exercises

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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 aren't further information

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not 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

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available