

# 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

##### Street address

bagh-e-Abrisham

##### City

kermanshah

##### Province

Kermanshah

##### Postal code

6714414874

##### Phone

+98 83 3428 3276

##### Email

saber.beygie@gmail.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Razi university

##### Full name of responsible person

#### Street address

baghe abrisham

#### City

kermanshah

#### Province

Kermanshah

#### Postal code

6714414874

#### Phone

+98 83 3428 3272

#### 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

##### Street address

baghe abrisham

##### City

kermanshah

##### Province

Kermanshah

##### Postal code

6714414864

##### Phone

+98 83 3428 3272

##### Email

gandomi777@gmail.com

## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

RAZI University

**Full name of responsible person**

farzaneh gandomi

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faculty member

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corrective exercises

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baghe Abrishan\m

**City**

kermanshah

**Province**

Kermanshah

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6714414874

**Phone**

+98 83 3728 3272

**Email**

gandomi777@gmail.com

**Person responsible for updating data**

**Contact**

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RAZI University

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farzaneh Gandomi

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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