

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### A Comparative Study of the Impact of Social Cognitive Theory-Based Educational Interventions Using Multimedia and AI Chatbot on Physical Activity in Overweight or Obese Male Secondary School Students

#### Protocol summary

##### Study aim

Comparing the Impact of Social Cognitive Theory-Based Educational Interventions Using Multimedia and AI Chatbot on Physical Activity in Overweight or Obese Male Secondary School Students in Bushehr City.

##### Design

A randomized, clinical trial with control group, parallel groups on 180 students. Excel software will be used for randomization.

##### Settings and conduct

This study will compare the effect of educational intervention using multimedia and AI chatbot on the physical activity behavior in overweight or obese male students in selected Secondary School in Bushehr City.

##### Participants/Inclusion and exclusion criteria

Study inclusion criteria: 1- Body mass index of 25 or higher 2- Willingness to participate in the study 3- Access to internet and electronic devices Study exclusion criteria: 4- Having physical activity disincentive issues 5- Failure to complete study questionnaires 6- Participation in professional sports classes

##### Intervention groups

Intervention group (1) : In this group, students will receive multimedia educational content based on social cognitive theory in 7 chapters. Intervention group (2) : In this group, the educational intervention will be implemented through a dedicated AI chatbot. Control group: This group will not receive any intervention.

##### Main outcome variables

Physical activity behavior; Body mass index; Perceived self-efficacy; Social support; Outcome expectations; Self-regulation.

#### General information

##### Reason for update

The reported value for the achieved sample size was

entered incorrectly.

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20250417065366N1**

Registration date: **2025-05-08, 1404/02/18**

Registration timing: **retrospective**

Last update: **2025-07-09, 1404/04/18**

Update count: **1**

##### Registration date

2025-05-08, 1404/02/18

##### Registrant information

###### Name

Mahan Razeghipour

###### Name of organization / entity

###### Country

Iran (Islamic Republic of)

###### Phone

+98 77 3354 1526

###### Email address

mahan9877@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2024-09-22, 1403/07/01

##### Expected recruitment end date

2024-10-21, 1403/07/30

##### Actual recruitment start date

2024-09-22, 1403/07/01

##### Actual recruitment end date

2024-10-21, 1403/07/30

##### Trial completion date

2025-01-22, 1403/11/03

##### Scientific title

A Comparative Study of the Impact of Social Cognitive Theory-Based Educational Interventions Using Multimedia and AI Chatbot on Physical Activity in Overweight or Obese Male Secondary School Students

**Public title**

Physical Activity Educational Program in Overweight or Obese Male Students

**Purpose**

Prevention

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

Willingness to participate in the study Having a body mass index of 25 or higher Access to internet Access to electronic devices such as a computer, laptop or smartphone

**Exclusion criteria:**

Failure to complete study questionnaires Having Physical activity disincentive issues Participation in professional sports classes

**Age**

From **13 years** old to **15 years** old

**Gender**

Male

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **180**

Actual sample size reached: **150**

**Randomization (investigator's opinion)**

N/A

**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 Bushehr University of Medical Sciences

**Street address**

Bahmani St, Salman Farsi St, Bushehr University of Medical Sciences

**City**

Bushehr

**Province**

Boushehr

**Postal code**

7518759338

**Approval date**

2024-03-11, 1402/12/21

**Ethics committee reference number**

IR.BPUMS.REC.1402.303

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

Physical Activity

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

Physical activity Behavior

**Timepoint**

Before intervention, 1 and 3 months after intervention

**Method of measurement**

7-day physical activity questionnaire

**2****Description**

Body mass index

**Timepoint**

Before intervention, 1 and 3 months after intervention

**Method of measurement**

Ratio of weight to squared height

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

Perceived self-efficacy

**Timepoint**

Before intervention, 1 and 3 months after intervention

**Method of measurement**

Questionnaire

**2****Description**

Outcome expectations

**Timepoint**

Before intervention, 1 and 3 months after intervention

**Method of measurement**

Questionnaire

**3****Description**

Social support

**Timepoint**

Before intervention, 1 and 3 months after intervention

## Method of measurement

Questionnaire

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#### Description

Self-regulation

#### Timepoint

Before intervention, 1 and 3 months after intervention

#### Method of measurement

Questionnaire

## Intervention groups

### 1

#### Description

Intervention group (1) : In this group, students received multimedia educational content based on social cognitive theory in 7 chapters.

#### Category

Behavior

### 2

#### Description

Intervention group (2) : In this group, the educational intervention was implemented through a dedicated AI chatbot.

#### Category

Behavior

### 3

#### Description

Control group: This group will not receive any intervention.

#### Category

Behavior

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Shahid Beheshti High School

##### Full name of responsible person

Milad Habibinia

##### Street address

Bahmani St, Salman Farsi St, Shahid Beheshti High School

##### City

Bushehr

##### Province

Boushehr

##### Postal code

7515883979

##### Phone

+98 77 3344 9855

##### Email

bushehr@medu.gov.ir

### 2

#### Recruitment center

##### Name of recruitment center

Shahid Mostafa Khomeini School

##### Full name of responsible person

Hossein Rabiei Motlagh

##### Street address

Valiasr Blvd, Moalem St, Shahid Mostafa Khomeini School

##### City

Bushehr

##### Province

Boushehr

##### Postal code

7515883979

##### Phone

+98 77 3333 1859

##### Fax

##### Email

bushehr@medu.gov.ir

### 3

#### Recruitment center

##### Name of recruitment center

Javadalaemeh High School

##### Full name of responsible person

Alireza Mashayekhi

##### Street address

Ayatollah Taleghani Blvd, Hamoor 34 St, Javadalaemeh High School

##### City

Bushehr

##### Province

Boushehr

##### Postal code

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##### Phone

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##### Fax

##### Email

bushehr@medu.gov.ir

### 4

#### Recruitment center

##### Name of recruitment center

Moslehiyan High School

##### Full name of responsible person

Bahram Behnamnia

##### Street address

Imam Reza Blvd, Moslehiyan High School

##### City

Bushehr

##### Province

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##### Postal code

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##### Phone

+98 77 3353 4644

##### Fax

##### Email

bushehr@medu.gov.ir

## 5

### Recruitment center

**Name of recruitment center**

22 Bahman High School

**Full name of responsible person**

Safar Jafari

**Street address**

Sangi St, Tohid St, 22 Bahman High School

**City**

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**Province**

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**Email**

khamisipoor@bpums.ac.ir

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Boushehr 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

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### Recruitment center

**Name of recruitment center**

Shahid Majid Boshkoh High School

**Full name of responsible person**

Ali Keshtkar

**Street address**

Chamran St, Shahid Majid Boshkoh High School

**City**

Bushehr

**Province**

Boushehr

**Postal code**

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**Phone**

+98 77 3332 2064

**Fax****Email**

bushehr@medu.gov.ir

## Person responsible for general inquiries

**Contact****Name of organization / entity**

Boushehr University of Medical Sciences

**Full name of responsible person**

Homamodin Javadzade

**Position**

Associate professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Health Promotion

**Street address**

Bahmani St, Salman Farsi St, Bushehr University of Medical Sciences

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**Province**

Boushehr

**Postal code**

7514633341

**Phone**

+98 77 3345 0084

**Email**

sh.javadzadeh@bpums.ac.ir

## Sponsors / Funding sources

### 1

**Sponsor****Name of organization / entity**

Boushehr University of Medical Sciences

**Full name of responsible person**

Gholamreza Khamisipoor

**Street address**

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**City**

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**Province**

Boushehr

**Postal code**

7514633341

## Person responsible for scientific inquiries

**Contact****Name of organization / entity**

Boushehr University of Medical Sciences

**Full name of responsible person**

Homamodin Javadzade

**Position**

Associate professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Health Promotion

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**Postal code**

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sh.javadzadeh@bpums.ac.ir

**Person responsible for updating data****Contact****Name of organization / entity**

Boushehr University of Medical Sciences

**Full name of responsible person**

Mahan Razeghipour

**Position**

Masters student

**Latest degree**

Bachelor

**Other areas of specialty/work**

Health Promotion

**Street address**

Bahmani St, Salman Farsi St, Bushehr University of  
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**Province**

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7516699918

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mahan9877@gmail.com

**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