

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

Comparison of the effects of two physical activity methods, HIIT and MICT, on some indicators of physical fitness and mental health of youth in the process of quitting addiction in Guilan province

Protocol summary

Study aim

This study aimed to compare the effects of two physical activity methods, HIIT and MICT, on some indicators of physical fitness and mental health of youth in the process of quitting addiction in Guilan province.

Design

A quasi-experimental design with two experimental groups and one control group, with parallel, double-blind, randomized groups, will be implemented on 60 young men recovering from addiction. Lottery will be used for randomization.

Settings and conduct

This study includes a pre-test and post-test and will compare the effects of two training methods, HIIT and MICT, on some indicators of physical fitness and mental health of young men recovering from addiction. The training will be conducted at a camp site.

Participants/Inclusion and exclusion criteria

(1) Age 18-35 years, (2) Having a history of addiction diagnosis; (3) Being in addiction treatment for more than one year; (4) Not having a serious medical or mental illness; and (5) Having primary education or higher.

Intervention groups

Intervention group 1: The high-intensity interval training group will be trained for 12 weeks, three sessions per week for 1 hour, including a 10-minute warm-up, 40 minutes of non-competitive basketball training, resistance training using body weight, jumping rope and running, and a 10-minute cool-down. A Polar heart rate monitor will be used to control the intensity of the training in the range of 80-85% of maximum heart rate. Intervention group 2: Moderate-intensity continuous training group. The moderate-intensity continuous training group will be trained for 12 weeks, three sessions per week for 1 hour, including a 10-minute warm-up, 40 minutes of main training including 20 minutes of mindfulness-based training activity (kata

techniques) and 20 minutes of aerobic training (aerobic circuit), and a 10-minute cool-down.

Main outcome variables

Cardiovascular endurance, strength, body composition

General information

Reason for update

Acronym

HIIT, MICT

IRCT registration information

IRCT registration number: **IRCT20180503039517N15**

Registration date: **2026-07-10, 1405/04/19**

Registration timing: **registered_while_recruiting**

Last update: **2026-07-10, 1405/04/19**

Update count: **0**

Registration date

2026-07-10, 1405/04/19

Registrant information

Name

Soleyman Ansari Kolachahi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 13 3375 2906

Email address

solomonansari@phd.iaurasht.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2026-07-06, 1405/04/15

Expected recruitment end date

2026-07-21, 1405/04/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the effects of two physical activity methods, HIIT and MICT, on some indicators of physical fitness and mental health of youth in the process of quitting addiction in Guilan province

Public title

Investigating the effect of physical activity on physical fitness and mental health of young people recovering from addiction

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Age 18-35 years Having a diagnosis of addiction In treatment for addiction for over a year Having primary or higher literacy

Exclusion criteria:

Serious medical or mental illness Having diseases of the cardiovascular, respiratory, and nervous systems Having antisocial personality disorder and borderline personality disorder Unwillingness to participate in the intervention

Age

From **18 years** old to **35 years** old

Gender

Male

Phase

N/A

Groups that have been masked

- Outcome assessor
- Data analyser

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

Sixty young men recovering from addiction will be selected using a convenience sampling method. Through a lottery (participants' names will be written on paper and will be divided into three groups (2 intervention groups and a control group) through a random lottery.

Blinding (investigator's opinion)

Double blinded

Blinding description

In this research, the persons responsible for evaluating and collecting information, as well as the data analyst, are unaware of the type of intervention and the participants in the research groups.

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Research Ethics Committee of Islamic Azad University- Babol Branch

Street address

Babol Azad University, Rahimi Highway, Babol

City

Babol

Province

Mazandaran

Postal code

37381-47471

Approval date

2026-01-19, 1404/10/29

Ethics committee reference number

IR.IAU.BABOL.REC.1404.170

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

Drug addiction

ICD-10 code

Drug depen

ICD-10 code description

Z72.2

Primary outcomes**1****Description**

Cardiovascular endurance

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

The Harvard Step Test will be used to measure cardiovascular endurance.

2**Description**

Endurance strength

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

A hand dynamometer will be used to measure hand muscle strength.

3

Description

Body mass index (BMI)

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

For each participant, the body mass index (BMI) will be calculated from the ratio of weight in kilograms to the second power of height in meters.

Secondary outcomes

1

Description

Aggression

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

The Bass and Perry Aggression Questionnaire will be used.

2

Description

Sleep quality

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

Pittsburgh Sleep Quality Questionnaire will be used.

3

Description

Stress-Anxiety-Depression

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

The DASS-21 Stress-Anxiety-Depression Questionnaire will be used.

4

Description

Feeling lonely

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

The UCLA Loneliness Questionnaire will be used.

5

Description

Suicidal ideation

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

The suicidal ideation scale of Mohammadifar, Habibi, and Besharat (2005) will be used.

6

Description

Self-control

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

The short-form self-control questionnaire by Tangi, Baumeister, and Boone (2004) will be used.

7

Description

Substance abuse

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

The Alivardinia and Younesi (2014) Drug, Alcohol, and Psychotropic Substance Use Assessment Questionnaire will be used.

8

Description

Rumination

Timepoint

48 hours before the intervention and 48 hours after 12 weeks of intervention

Method of measurement

The Nolen-Hoeksma (1991) rumination scale will be used.

Intervention groups

1

Description

Intervention group: 1 High-intensity interval training group: Participants will perform 60-minute stationary exercises for 12 weeks, 3 sessions per week, including a 10-minute warm-up, 40-minute HIIT session, and 10-minute cool-down. The intensity of the exercise will be controlled using a heart rate monitor in the range of 80 to 85 percent of the subjects' maximum heart rate.

Category

Treatment - Other

2

Description

Intervention group: 2 groups of moderate-intensity continuous exercise: Participants will perform aerobic exercise, stationary cycling, and slow running exercises for 12 weeks, 3 sessions per week, each session lasting 60 minutes. The intensity of the exercise will be controlled using a heart rate monitor in the range of 55 to 65% of the subjects' maximum heart rate.

Category
Treatment - Other

Type of organization providing the funding
Academic

Recruitment centers

1

Recruitment center

Name of recruitment center
Gilan Provincial Welfare Organization
Full name of responsible person
Hamed Atash Afrooz
Street address
Nurse Street - Gilan Provincial Welfare Organization
City
Rasht
Province
Guilan
Postal code
4147654919
Phone
+98 13 3336 8900
Email
adibsaberf@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Islamic Azad University
Full name of responsible person
Dr Alireza Seidavi
Street address
Lacan Blvd
City
Rasht
Province
Guilan
Postal code
4147654919
Phone
+98 13 3342 4080
Email
adibsaberf@gmail.com
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Islamic Azad University Rasht branch
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

Person responsible for general inquiries

Contact

Name of organization / entity
Islamic Azad University
Full name of responsible person
Fahimeh Adibsaber
Position
Faculty member
Latest degree
Ph.D.
Other areas of specialty/work
Physiology
Street address
Lakan Blv
City
Rasht
Province
Guilan
Postal code
4147663713
Phone
+98 13 3342 4238
Email
adibsaberfahimeh@iau.ac.ir

Person responsible for scientific inquiries

Contact

Name of organization / entity
Islamic Azad University
Full name of responsible person
Fahimeh Adibsaber
Position
faculty member
Latest degree
Ph.D.
Other areas of specialty/work
Physiology
Street address
Lacan Blv
City
Rasht
Province
Guilan
Postal code
4147663713
Phone
+98 13 3342 4238
Email
adibsaberfahimeh@iau.ac.ir

Person responsible for updating data

Contact

Name of organization / entity
Islamic Azad University
Full name of responsible person

Fahimeh Adibsaber

Position

faculty member

Latest degree

Ph.D.

Other areas of specialty/work

Physiology

Street address

Lakan Blv

City

Rasht

Province

Guilan

Postal code

4147663713

Phone

+98 910 103 3889

Email

adibsaberfahimeh@iau.ac.ir

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

Not applicable

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Not applicable

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