Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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
Type of organization providing the funding
Academic

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
Lakan 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