

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

13 Jun 2026

### "The effect of phase III cardiac rehabilitation virtual training on the self-efficacy of patients after coronary artery bypass surgery"

#### Protocol summary

##### Study aim

Determining the effect of phase III cardiac rehabilitation virtual training on the self-efficacy of patients after coronary artery bypass surgery

##### Design

A clinical trial with a control group, With a parallel group, randomized, Available with permutation block method, Sample size of 70 patients.

##### Settings and conduct

Sampling is done in the Farshchian heart center of Hamedan city, Among patients undergoing coronary artery bypass surgery. By obtaining informed consent to participate in the study, The test group will undergo virtual rehabilitation training in written and video forms with Self-efficacy content during eight sessions. These trainings will be online in one month. The control group will not receive any training until the end of the study. Data are collected from both groups using a demographic questionnaire and a Self-efficacy questionnaire in the management of heart and blood vessels, 45 days after discharge and one month after the intervention.

##### Participants/Inclusion and exclusion criteria

The main Inclusion criteria: Patients living in Hamadan who have recently undergone coronary artery bypass surgery, Have their consent to participate in the study, are between the ages of 30 and 70, Have access to and ability to use mobile phones, The Internet and platforms related to it and do not have mental illness or physical and mental limitations and have at least basic literacy The exclusion criteria are: Patients who are illiterate or over 80 years old or have participated in another educational program in the last 6 months.

##### Intervention groups

The educational materials that have been expressed, Recorded and written by the researcher will be available to the intervention group during eight sessions through virtual space (Ita messenger and WhatsApp) within a month. The control group only received routine training

during discharge.

##### Main outcome variables

Self-efficacy

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20240925063158N1**

Registration date: **2024-10-07, 1403/07/16**

Registration timing: **prospective**

Last update: **2024-10-07, 1403/07/16**

Update count: **0**

##### Registration date

2024-10-07, 1403/07/16

##### Registrant information

##### Name

Zahra Amirlohesari

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

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##### Email address

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##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2024-10-22, 1403/08/01

##### Expected recruitment end date

2024-12-21, 1403/10/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**  
empty

**Scientific title**  
"The effect of phase III cardiac rehabilitation virtual training on the self-efficacy of patients after coronary artery bypass surgery"

**Public title**  
"The effect of phase III cardiac rehabilitation virtual training on the self-efficacy of patients after coronary artery bypass surgery"

**Purpose**  
Education/Guidance

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
The patient has recently undergone CABG The patient should be willing to learn and participate in the study Ability to use mobile platforms and have access to the Internet The patient must be a resident of Hamadan province Have a weak or moderate level of self-efficacy in primary results The patient should have at least primary education No mental illness or movement and learning limitations The patient must consent to participate in the research Be in the age range of 30 to 70 years  
**Exclusion criteria:**  
The patient be over 80 years old Participate in another educational program in the last 6 months Have severe hearing and vision disorders The patient is not literate

**Age**  
From **30 years** old to **70 years** old

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**  
*No information*

**Sample size**  
Target sample size: **70**

**Randomization (investigator's opinion)**  
Randomized

**Randomization description**  
The random sampling method is available and is done in the form of permutation blocks in two groups, Test and control, and at the time of discharge, The researcher introduced himself and the purpose of the study to the patients who have the conditions to enter this study. His companion states and if the patient wishes to participate in the study, Informed consent is obtained and the patient is placed in two control or test groups using the random block method. In this method, 6 sheets of paper are considered and letter A (test group) and another letter B (control group) are written on the sheet. In this method, There are 6 writing modes. The 6 leaves on which the above groups are written are mixed together and put aside inside the container. With each eligible patient's visit, a sheet is randomly picked by someone outside the study, and the task of 4 people is determined based on the selected sheet, and then the sheet is placed in the container. This means that the first 4

people who enter the research are placed in that group from left to right with the same order of letters. This method is repeated for the total number of patients needed for this study to complete the desired sample size.

**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**

Working group/committee of ethics in research of Hamadan University of Medical Sciences

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University Research and Technology Vice-Chancellor., Hamedan University of Medical Sciences., Shahid Fahmideh St

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**Postal code**

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**Approval date**

2024-09-14, 1403/06/24

**Ethics committee reference number**

IR.UMSHA.REC.1403.396

**Health conditions studied**

**1**

**Description of health condition studied**

Patients undergoing coronary artery bypass surgery

**ICD-10 code**

125.1

**ICD-10 code description**

Atherosclerotic heart disease of native coronary artery

**Primary outcomes**

**1**

**Description**

Self-efficacy

**Timepoint**

Before the intervention, 45 days and again 75 days after discharge from the hospital

**Method of measurement**

Using the Cardiovascular disease management Self-efficacy questionnaire of Esteka et al.: The Cardiovascular disease management Self-efficacy questionnaire was designed and compiled by Esteka et al. In (2015) in order to measure the Self-efficacy of Cardiovascular disease management. This questionnaire has 9 questions and 3 components of heart risk Self-efficacy, Treatment adherence Self-efficacy and symptom recognition Self-efficacy and based on the Likert spectrum with questions such as (you can avoid life Problems and Difficult situations and daily stress well) minimize) measures the Self-efficacy of Cardiovascular disease management. The Distribution of questionnaire questions is such that questions 1 to 4 examine the Self-efficacy of cardiac risk, questions 5 and 6 examine the Self-efficacy of following treatment, and questions 7, 8, and 9 examine the Self-efficacy of diagnosing symptoms.

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: When the patient is discharged from the inpatient department, the informed consent form and the clinical and demographic information questionnaire and the phone number are completed and received from the patient or the patient's companion. Then, according to the title of this study, which includes the third phase of cardiac rehabilitation, the next step of the study will be conducted in the period of 4 to 6 weeks after discharge from the hospital. In this study, the period of 5 weeks (45 days) after discharge in patients undergoing CABG will be the time to start virtual training for patients, the patients who have been included in the test group during sampling must complete the cardiovascular questionnaire after this 45-day period. This questionnaire was calculated with Cronbach's alpha coefficient of 80% in the research of Jafari Sajzi et al. (2017) after it was approved by 10 faculty members of Hamedan School of Nursing and Midwifery in terms of validity and reliability through an electronic file. It is sent to the patients and completed by the patient, and according to the time of entering the study, the researcher will join 7 groups of 10 people and 1 educational channel created by the researcher. Educational groups and channels are created on platforms accessible to patients, which were selected in the initial surveys of cardiac patients, because of their easy access and unlimited content uploading. The educational content according to the mentioned references and according to the titles included in the Esteka Cardiology Questionnaire for 1 month during 8 sessions (2 sessions per week) for 30 minutes based on the educational checklist created by the researcher in the form of video, audio, and written files in The platforms will be loaded. After each training session, feedback and educational follow-ups in the form of virtual or telephone conversations begin to evaluate the

results of the training provided during the last week. After 75 days (45 days after discharge and after the completion of the one-month training period), the Esteka cardiology questionnaire was given to the study group again and using the electronic file sent to the groups by the patient or It will be completed with the patient. Data and results will be analyzed by SPSS23 software. It should be noted that the cost of internet consumption for the test group during this period will be provided by the researcher.

#### Category

Rehabilitation

### 2

#### Description

Control group: The patient's discharge time is completed from the section of the informed consent form and the phone number is received from the patient or the patient's companion. Then, according to the title of this study, which includes the third phase of cardiac rehabilitation, the next step of the study will be conducted in the period of 4 to 6 weeks after discharge from the hospital. In this study, the period of 5 weeks (45 days) after discharge in patients undergoing CABG will be the time to start virtual training for patients, after 45 days the Steka questionnaire must be completed by the control group. This questionnaire is calculated with Cronbach's alpha coefficient of 80% in The research of Jafari Sajzi et al. (2017) after it was approved by 10 faculty members of Hamedan Medical Sciences Faculty of Nursing and Midwifery in terms of validity and reliability, was sent to the patients through an electronic file and was completed by the patient. The patients who are placed in the control group with permutation block randomization will not receive the educational content that is provided to the test group during multiple sessions. And finally, without any other training and action, 75 days after the discharge (45 days after the discharge and the completion of the 1-month training period), the information questionnaire of Esteka will be provided to this group again through an electronic file through Rubika or ETA software. is given After completing all the questionnaires, data will be collected and SPSS23 software will be used for statistical analysis of the data. It should be noted that the intervention group will not be deprived of training during discharge, and after the completion of the study period, if the results of this research are effective, all training will be provided to the control group.

#### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Farshchian Cardiovascular Hospital

##### Full name of responsible person

Zahra Amirloohesari

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**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

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**Full name of responsible person**

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

Yes

**Title of funding source**

Hamedan 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

**Person responsible for general inquiries****Contact****Name of organization / entity**

Hamedan University of Medical Sciences

**Full name of responsible person**

Zahra Amirlohesari

**Position**

Master's student

**Latest degree**

Bachelor

**Other areas of specialty/work**

Nursery

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**Latest degree**

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**Other areas of specialty/work**

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**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