

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

04 Aug 2026

### The Effect of Smartphone-Based Learning on the Knowledge and Skill of Nursing B.S Students in Adult Basic Cardiopulmonary Resuscitation.

#### Protocol summary

##### Study aim

The purpose of this study was to investigate the effect of smartphone-based learning on the knowledge and skills of undergraduate nursing students in the recovery of cardiac and pulmonary bases in adults.

##### Design

This study is a semi-experimental design with pretest-posttest design with control group. Sampling will be done by a total of five fifth semester undergraduate nursing students (two classes). Classes A and B will be assigned to two groups using the lottery

##### Settings and conduct

The research environment is the Faculty of Nursing and Midwifery of Iran University of Medical Sciences

##### Participants/Inclusion and exclusion criteria

Entry criteria for the study: 1 - willingness to participate in the research, 2 - lack of participation in classes and workshops related to CPR in the past. Exclusion criteria: 1) Unwillingness to attend research; 2) Non-attendance at least one of the sessions of the educational intervention program.

##### Intervention groups

Intervention group: 1- Explaining the method of work and obtaining written consent. 2- Complete the demographic information form, knowledge and skill questionnaire on adult BLS by each student. 3- Obtaining an adult BLS skill test based on the observation checklist as the basic skill of the students 4- Getting adult BLS tutorials using power point tutorials and movie previews, Teaching and practical exercise on CPR mannequins. 5- Students receive BLS application after getting trained. Immediately, 1 and 3 months after the intervention, a post-test is used to test the knowledge and skills.

##### Main outcome variables

knowledge and skill

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20180130038553N1**

Registration date: **2018-04-23, 1397/02/03**

Registration timing: **registered\_while\_recruiting**

Last update: **2018-04-23, 1397/02/03**

Update count: **0**

##### Registration date

2018-04-23, 1397/02/03

##### Registrant information

##### Name

zeynab mollaee

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 34 3222 2132

##### Email address

mollaee.z@tak.iums.ac.ir

##### Recruitment status

##### Recruitment complete

##### Funding source

##### Expected recruitment start date

2018-03-10, 1396/12/19

##### Expected recruitment end date

2018-09-10, 1397/06/19

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

The Effect of Smartphone-Based Learning on the Knowledge and Skill of Nursing B.S Students in Adult Basic Cardiopulmonary Resuscitation.

**Public title**

The Effect of Smartphone-Based Learning on the Knowledge and Skill of Students in Adult Basic Cardiopulmonary Resuscitation.

**Purpose**

Education/Guidance

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

Having an Android smartphone without having the same training in BLS

**Exclusion criteria:**

Students who are semester 5 do not pass the emergency unit

**Age**

No age limit

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

- Participant

**Sample size**

Target sample size: 80

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

Sampling will be carried out in a complete way. The fifth semester nursing undergraduate students in two classes A and B will be divided into two groups of control and training using the lottery. Both research groups will receive an adult-based cardiopulmonary resuscitation education by lecturing using PowerPoint and displaying the film at a two-hour session within the classroom by the researcher. Students in the smartphone software control group will not receive adult cardiovascular rescue training. Then, for the smartphone software test group, an adult-based cardiopulmonary resuscitation training will be installed under Android.

**Blinding (investigator's opinion)**

Single blinded

**Blinding description**

The control group is kept blind in the study. The study is that both groups (test and control) participate in the cardiovascular training class using lecture and PowerPoint. The test group then receives cardiopulmonary resuscitation software from their smartphones. The control group is not aware of the software. To control the ethics, after testing the software will be available to the control group.

**Placebo**

Not used

**Assignment**

Parallel

**Other design features****Secondary Ids**

empty

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

Ethics committee of Iran University of Medical Sciences

**Street address**

Iran University of Medical Sciences, Hemat Highway next to Milad Tower, Tehran

**City**

Tehran

**Province**

Tehran

**Postal code**

1449614535

**Approval date**

2018-01-17, 1396/10/27

**Ethics committee reference number**

IR.IUMS.REC 1396.9511706004

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

Cardiac arrest, unspecified

**ICD-10 code**

I46.9

**ICD-10 code description**

Cardiac arrest, cause unspecified

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

knowledge

**Timepoint**

Immediately - one month - three months later

**Method of measurement**

A researcher-made questionnaire on adult renal cardiovascular resuscitation questionnaire, containing 20 questions of a single score

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

Skill

**Timepoint**

Immediately - one month- three months later

**Method of measurement**

Adjusted checklist from the American Heart Association 2015

**Intervention groups**

## 1

### Description

Intervention group: Intervention group: 1- Explaining the method of work and obtaining written consent. 2- Complete the demographic information form and Knowledge Assessment Questionnaire on adult BLS by each student. 3- Getting the most common adult BLS tutorials using PowerPoint presentations and film shows, training and practice exercises on mannequins. 4. Students in this group will receive an adult-based cardiopulmonary resuscitation training program after receiving basic training. Immediately, one and three months after the intervention, a post-test is used to assess the knowledge and skills of adult BLS.

### Category

Other

## 2

### Description

Control group: 1- Explaining the method of work and obtaining written consent. 2- Complete the demographic information form and Knowledge Assessment Questionnaire on adult BLS by each student. 3- Getting the most current adult BLS tutorials using PowerPoint presentations, screening videos, training and practice exercises on mannequins. Immediately, one and three months after the intervention, a post-test is used to assess the knowledge and skills of adult BLS.

### Category

Other

## Recruitment centers

## 1

### Recruitment center

#### Name of recruitment center

Faculty of Nursing and Midwifery, Iran University of Medical Sciences

#### Full name of responsible person

Zeynab Mollaei

#### Street address

Iran Nursing and Midwifery Faculty, Rashid Yasemi St, above Vanak Square, Valiasr Ave, Tehran

#### City

Tehran

#### Province

Tehran

#### Postal code

۱۹۹۶۷۱۳۸۸۳

#### Phone

+98 21 4365 1000

#### Email

fnm@iums.ac.ir

## Sponsors / Funding sources

## 1

### Sponsor

#### Name of organization / entity

Iran University of Medical Sciences

#### Full name of responsible person

Kazem Malakoti

#### Street address

Iran Nursing and Midwifery Faculty, Rashid Yasemi St., above Vanak Square, Valiasr Ave, Tehran

#### City

Tehran

#### Province

Tehran

#### Postal code

۱۹۹۶۷۱۳۸۸۳

#### Phone

+98 21 4365 1000

#### Email

fnm@iums.ac.ir

#### Grant name

#### Grant code / Reference number

#### Is the source of funding the same sponsor organization/entity?

Yes

#### Title of funding source

Iran 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

Iran University of Medical Sciences

#### Full name of responsible person

Tahereh Najafi

#### Position

Ph.D. in Nursing, Dean of Faculty of Nursing and Midwifery

#### Latest degree

Ph.D.

#### Other areas of specialty/work

Nursery

#### Street address

Iran Nursing and Midwifery Faculty, Rashid Yasemi St, above Vanak Square, Valiasr Ave, tehran

#### City

Tehran

#### Province

Tehran

#### Postal code

۱۹۹۶۷۱۳۸۸۳

#### Phone

+98 21 4365 1000

#### Email

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**

Iran University of Medical Sciences

**Full name of responsible person**

Tahereh Najafi

**Position**

Ph.D. in Nursing, Dean of Faculty of Nursing and Midwifery

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Nursery

**Street address**

Iran Nursing and Midwifery Faculty, Rashid Yasemi St, above Vanak Square, Valiasr Ave, tehran

**City**

Tehran

**Province**

Tehran

**Postal code**

۱۹۹۶۷۱۳۸۸۳

**Phone**

+98 21 4365 1000

**Email**

najafi.t@iums.ac.ir

## Person responsible for updating data

### Contact

**Name of organization / entity**

Iran University of Medical Sciences

**Full name of responsible person**

Zeynab Mollaei

**Position**

Nurse

**Latest degree**

Bachelor

**Other areas of specialty/work**

Nursery

**Street address**

Iran Nursing and Midwifery Faculty, Rashid Yasemi St, above Vanak Square, Valiasr Ave, tehran

**City**

Tehran

**Province**

Tehran

**Postal code**

۱۹۹۶۷۱۳۸۸۳

**Phone**

+98 21 4365 1000

**Email**

z.mollaei@gmail.com

## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**

Yes - There is 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

**Title and more details about the data/document**

Only part of the data, such as the original outcome information, is shared.

**When the data will become available and for how long**

Start the access period 6 months after printing the results

**To whom data/document is available**

Academic and scientific institutions

**Under which criteria data/document could be used**

Similar studies

**From where data/document is obtainable**

Iran University of Medical Sciences

**What processes are involved for a request to access data/document**

To access the data, follow up with the university vice chancellor.

**Comments**