

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

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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

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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

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

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Email

Person responsible for scientific inquiries

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Tahereh Najafi

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Person responsible for updating data

Contact

Name of organization / entity

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Full name of responsible person

Zeynab Mollaei

Position

Nurse

Latest degree

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Other areas of specialty/work

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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