Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Oct 2026

Comparing effectiveness of prenatal care training methods (m-learning Vs. e-learning) on midwive’s awareness and self-efficacy

Protocol summary

Study aim

Comparison of the Effect of Two Methods of E-Learning on Pregnancy Care (Computer, Mobile) on Midwives' Knowledge and Self-efficacy

Design

This is a experimental study that compares the effect of education on prenatal care (nutrition, exercise, weight control during pregnancy) in two ways: electronic learning (computer and mobile) on the knowledge and efficiency of midwives and their satisfaction with educational methods. At first, samples were taken from 80 midwives working in health centers that had a benchmark for entering the study. Because midwives of each group have the least communication, midwives of each health center are divided into two groups with RANDOM ALLOCATION .

Settings and conduct

There is no blindness in this research. after obtaining consent, samples will be included in the study. Educational content in the field of prenatal care is prepared using valid and appropriate resources. Then, its validity and reliability loade on the cme electronic system and in the mobile group on the mobile app. In the cME electronic system, qualified samples can be used online and offline. The mobile app comes with the help of well-known programmers and is installed on a mobile phone. Samples can use educational content without using the Internet (offline).Researcher share phone number to samples to contact the researcher, as well as how to work with the cme system or mobile app. The degree of awareness and self-efficacy of the samples is measured using self-made questionnaire which is electronically. Samples can access information for one month and have access to educational content. Immediately after the end of the intervention, the samples again returned to the questionnaire of self-efficacy and knowledge about the educational content and their satisfaction with the method of e-learning at the end of the intervention using an electronic questionnaire

Participants/Inclusion and exclusion criteria

Inclusion criteria: degree of Associate , Bachelor, Master of Midwifery؛ Employed in health centers of south of Tehran and Iran؛ Has a job related to midwifery؛ know the computer and how to use it؛ Mobile phone with educational software installed؛ Exclusion criteria؛ Have a history of participation in research related courses؛ dont know the computer and how to use it؛ dont have A mobile phone with the ability to install educational software؛

Intervention groups

This study included two intervention groups, without control group. An computers e-learning group , that uses the cme electronic system to learn. The mobile e-learning group, uses a mobile app to learn.

Main outcome variables

Awareness; Self-efficacy; Satisfaction

General information

Reason for update

Acronym

cme-continuous medical education

IRCT registration information

IRCT registration number: **IRCT20170809035585N2**
Registration date: **2018-03-04, 1396/12/13**
Registration timing: **retrospective**

Last update: **2018-03-04, 1396/12/13**
Update count: **0**

Registration date

2018-03-04, 1396/12/13

Registrant information

Name

zinat keshtkare

Name of organization / entity

medical University Tehran

Country

Iran (Islamic Republic of)

Phone

+98 28 3365 5177

Email address

z-keshtkar@razi.tums.ac.ir

Recruitment status

Recruitment complete

Funding source

medical University Tehran

Expected recruitment start date

2018-01-30, 1396/11/10

Expected recruitment end date

2018-03-01, 1396/12/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparing effectiveness of prenatal care training methods (m-learning Vs. e-learning) on midwive’s awareness and self-efficacy

Public title

Comparing effectiveness of prenatal care training methods (m-learning Vs. e-learning) on midwive’s awareness and self-efficacy

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criteria:

Have a mobile phone with the ability to install educational software know computers and how to use them Have relevant midwifery jobs Work in health centers of Tehran University of Medical Sciences degree of Undergraduate, Bachelor, Masters midwifery

Exclusion criteria:

participation in research related courses

Age

From **22 years** old to **62 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **80**

Randomization (investigator's opinion)

Randomized

Randomization description

Samples were selected by available sampling method from midwifery staff working in health centers in southern Tehran and Iran University who had the criteria for entering the study. 80 individuals were selected. Each midwife had the least relationship with each other. Midwives each The health center is located in a group. Subsequently, midwives of health centers in southern Tehran and Iran's health centers with random allocation (RANDOM ALLOCATION) were divided into two groups. First, the centers were given a number. Then on one side of the coin, the computer and the other side of the coin, Mobile was written, And it was supposed that every one of the coins that came in, the health centers would have a Odd number assigned to that group. The coin computer side came up and the health care center with a Odd number assigned to this group. 40 in the e-learning group with the CME system and 40 in the e-learning group with the mobile app. It should be noted that in this research there is no Allocation concealment.

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

medical University Tehran

Street address

Tohid Square; East Nusrat Street; Faculty of Nursing and Midwifery, Tehran University of Medical Sciences

City

tehran

Province

Tehran

Postal code

4314749913

Approval date

2017-07-05, 1396/04/14

Ethics committee reference number

IR.TUMS.FNM.REC.1396.2798

Health conditions studied

1

Description of health condition studied

pranatal care

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Efficacy

Timepoint

Before and immediately after the end of the intervention

Method of measurement

Using the questionnaire

2

Description

awareness

Timepoint

Before and immediately after the end of the intervention

Method of measurement

Using the questionnaire

3

Description

satisfaction

Timepoint

immediately after intervention

Method of measurement

questionnaire

Secondary outcomes

empty

Intervention groups

1

Description

At first, a pre-test questionnaire, which includes midwives' knowledge and self-efficacy about nutrition, exercise, and weight control during pregnancy, is provided electronically using a telegram application, Available to samples. Sample answers to the questionnaire are required to enter your email. The researcher will also receive answers through email. Then the samples will have access to educational content for one month. First intervention group (electronic learning group with computer): In this group, the e-learning content provided by the University of Tehran Virtual Faculty will be accessible through the website www.cme.tums.ac.ir. To upload the educational content On the CME electronic system, two midwifery professors are selected as referees and they examine and confirm the contents of the instruction and questions of pmp and the final questions of the text. Then the educational content is placed on the system. Samples will be logged in to the system of medical education (cme) and receive code and password in their user's system. After choosing a course on nutritional care during pregnancy, information about the course (including the supervisor , Editorial fellow, program goals, program introduction, program type, keywords)is shown. Samples choose the startup option, then the step-by-step content is presented. In this way, at the beginning of each curriculum, an introduction is made, then a question of the content of the next step is designed to distract the audience with the subject's curiosity. Then the content is displayed if the answer is correct. If the answer Incorrect options are automatically changed (pmp questions). These questions are for self-examination only and do not affect the final evaluation. Samples study the same way in step-by-step because they provide the sample in the summary of the content in the general information system. Educational content in 4 pdfs which includes pregnancy nutrition, prenatal exercises, weight control during pregnancy, and photos of exercise specimens in pregnancy, are eventually included in the educational content so that people can download and Study it offline. After the end of the intervention, a post-test questionnaire, which includes midwives' knowledge and self-efficacy questions about nutrition, exercise, weight control during pregnancy, and their satisfaction with the educational method are provided electronically

Category

Other

2

Description

Intervention group: At first, a pre-test questionnaire, which includes midwives' knowledge and self-efficacy about nutrition, exercise, and weight control during pregnancy, is provided electronically using a telegram application, Available to samples. Sample answers to the questionnaire are required to enter your email. The researcher will also receive answers through email. Then the samples will have access to educational content for one month.Second intervention group (mobile learning group): The content of the training is loaded by the engineer in the mobile app. This app available to people through the program of the telegram or in person through the program shareit. After installing the mobile phone, on the first page, Lego University of Medical Sciences, the providers and the main title (care for pregnancy) will be displayed. After selecting the option to continue, 3 items nutrition in pregnancy, exercise during pregnancy, weight control during pregnancy is displayed. Given the small mobile screen and the reader may need to cut the study suddenly, the content will be divided into small but relevant volumes. So if you click on any main item (nutrition during pregnancy, exercise during pregnancy, weight control during pregnancy), its items will be displayed. Clicking on the item again displays the relevant educational content as follows: Sets are divided into small but related volumes.After the end of the intervention, a post-test questionnaire, which includes midwives' knowledge and self-efficacy questions about nutrition, exercise, weight control during pregnancy, and their satisfaction with the educational method are provided electronically

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Health Centers under the supervision of Tehran University of Medical Sciences

Full name of responsible person

Midwives working in health centersn southern Tehran under the supervision of Tehran University of Me

Street address
All health centers in southern Tehran under the supervision of Tehran University of Medical Sciences

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tehran

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Sponsors / Funding sources

1

Sponsor

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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
Tehran 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
Tehran University of Medical Sciences

Full name of responsible person
dr mehrnaz geranmayeh

Position
Assistant Professor

Latest degree
Ph.D.

Other areas of specialty/work
Medical Education

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
Because of the possibility of using it
Study Protocol
No - There is not a plan to make this available
Statistical Analysis Plan
No - There is not a plan to make this available
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
No - There is not a plan to make this available
Analytic Code
No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available