

Clinical Trial Protocol

Iranian Registry of Clinical Trials

17 Jun 2026

The effect of an educational intervention based on "collaborative approach and learning cooperatives" model on the nurses knowledge and practice about vascular access care in hemodialysis patients

Protocol summary

vascular access

Study aim

The effect of educational intervention based on the "Collaborative Approach and Learning Cooperatives" (CALC) model on nurses' knowledge and practice about hemodialysis vascular access care will be investigated.

Design

A clinical trial with a control group with parallel, randomized groups

Settings and conduct

This study will be performed on nurses working in hemodialysis wards of Urmia educational and medical centers. The educational content prepared by nursing students in the field of vascular access will be presented to nurses by the researcher in the hemodialysis ward training class for 4 sessions.

Participants/Inclusion and exclusion criteria

Inclusion criteria : - Satisfaction to participate in the study - A nurse working in the hemodialysis department with at least three months of work experience - Responsible for direct care of the patient (ward nurse) - No history of participating in vascular access care training sessions
Exclusion criteria : - Having a history of participating in vascular access care training sessions

Intervention groups

The present study will be a quasi-experimental study performed on 50 hemodialysis nurses. 25 nurses will be in the intervention group and after completing the training sessions based on the CALC model, they will complete the questionnaires of knowledge and care technique of vascular access to hemodialysis in two time periods of one and two months after the intervention. Also, 25 nurses in the control group will receive routine training in the field of vascular access care, and the mentioned questionnaires, like the intervention group, will be completed for this group.

Main outcome variables

Nurses Knowledge and practice in care of hemodialysis

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20161008030214N3**

Registration date: **2022-01-20, 1400/10/30**

Registration timing: **registered_while_recruiting**

Last update: **2022-01-20, 1400/10/30**

Update count: **0**

Registration date

2022-01-20, 1400/10/30

Registrant information

Name

Hossein Jafarizadeh

Name of organization / entity

Urmia University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 44 3275 4961

Email address

jafarizadeh@umsu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-04-21, 1400/02/01

Expected recruitment end date

2022-03-20, 1400/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date
empty

Scientific title
The effect of an educational intervention based on "collaborative approach and learning cooperatives" model on the nurses knowledge and practice about vascular access care in hemodialysis patients

Public title
The effect of an educational intervention on the nurses knowledge and practice about vascular access care in hemodialysis patients

Purpose
Education/Guidance

Inclusion/Exclusion criteria
Inclusion criteria:
Satisfaction to participate in the study A nurse working in the hemodialysis department with at least three months of work experience Responsible for direct care of the patient (ward nurse) No history of participating in vascular access care training sessions
Exclusion criteria:
Having a history of participating in hemodialysis vascular access care training sessions

Age
No age limit

Gender
Both

Phase
N/A

Groups that have been masked

- Participant
- Data analyser

Sample size
Target sample size: **50**

Randomization (investigator's opinion)
Randomized

Randomization description
The sampling method in this study will be simple random sampling. So that from among the nurses working in hemodialysis units of Imam Khomeini and Taleghani hospitals who have inclusion criteria, 50 nurses will be randomly selected. The selected nurses are then divided into control and intervention groups. The random allocation of samples will be as follows: According to the list of nurses working in hemodialysis units, a number from 1 to 50 for each nurse will be considered and the numbers will be placed in the envelope. Then one number is randomly selected for the control group and one number for the intervention group until 25 nurses are in the control group and 25 nurses are in the intervention group.

Blinding (investigator's opinion)
Double blinded

Blinding description
Nurses will not be aware of whether they are in the intervention or control group, and the data analyzer will not be aware of this assignment during the final data analysis.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Urmia University of Medical Sciences

Street address

Orjhans Ave., Resalat Blvd., Urmia Town

City

Urmia

Province

West Azarbaijan

Postal code

5714783734

Approval date

2021-04-07, 1400/01/18

Ethics committee reference number

IR.UMSU.REC.1400.010

Health conditions studied

1

Description of health condition studied

Nurses knowledge and practice in care of hemodialysis vascular access

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Nurses knowledge of hemodialysis vascular access

Timepoint

Before the intervention, one month after the intervention and two months after the intervention

Method of measurement

Nurses knowledge of hemodialysis vascular access
Questionnaire

2

Description

Nurses Practice in care of hemodialysis vascular access

Timepoint

Before the intervention, one month after the intervention and two months after the intervention

Method of measurement

Checklist related to vascular access care techniques

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: 25 nurses will be in the intervention group. The educational intervention in this group will be based on the CALC model. Based on this model, nursing students are divided into small groups to promote participatory learning. Based on the Evidence-Based Performance Process (EBP), they design their question on hemodialysis vascular access with PICOT strategy. Based on the latest available scientific evidence, The collected information will be prepared in a concise and comprehensive form in the form of a poster in a predetermined format. The titles of the posters will be related to the prevention of infection related to hemodialysis catheters, how to connect and disconnect hemodialysis catheters, physical examination of arterial and venous fistulas and how to converge arterial and venous fistulas. The contents of the posters, in addition to the supplementary materials on the subject of each poster in four sessions, each session will be presented to the nurses by the researcher for 45 to 60 minutes in the training class of the ward. Therefore, the implementation of this model, in addition to strengthening the basic skills of research and promoting active learning in students, will play an important role in updating nurses' awareness and providing care based on the latest scientific evidence. Questionnaires of knowledge and care techniques of vascular access to hemodialysis will be completed in two time periods of one and two months after the intervention.

Category

N/A

2

Description

Control group: 25 nurses will be in the control group and they will receive routine training in the field of vascular access care and questionnaires of awareness and care techniques in vascular access to hemodialysis, one month and then two months later. From the beginning of the pre-test for this group will be completed as the intervention group.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center
Imam Khomeini Hospital

Full name of responsible person

Negin Azizi

Street address

Ershad Blvd., Urmia Town

City

Urmia

Province

West Azarbaijan

Postal code

5714783734

Phone

+98 44 3346 9931

Email

azizinumsu@gmail.com

Web page address

<http://imam.umsu.ac.ir>

2

Recruitment center

Name of recruitment center

Taleghani Hospital

Full name of responsible person

Negin Azizi

Street address

Kashani Blvd., Urmia Town

City

Urmia

Province

West Azarbaijan

Postal code

5714783734

Phone

+98 44 3348 7990

Email

azizinumsu@gmail.com

Web page address

<http://Taleghani.umsu.ac.ir>

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Oroumia University of Medical Sciences

Full name of responsible person

Saber Gholizadeh

Street address

Orjhans Ave., Resalat Blvd., Urmia, Iran

City

Urmia

Province

West Azarbaijan

Postal code

571478373

Phone

+98 44 3193 7224

Email

sabergholizadeh@yahoo.com

Web page address

<https://research.umsu.ac.ir>

Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Oroumia 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
School of Nursing and Midwifery of Urmia
Full name of responsible person
Hossein Jafari zadeh
Position
Vice Chancellor for Education of Nursing and Midwifery Faculty of Urmia
Latest degree
Master
Other areas of specialty/work
Nursery
Street address
Department of Nursing. School of Nursing and Midwifery, Nazlou Campus, Urmia University of Medical
City
Urmia
Province
West Azarbaijan
Postal code
5756115335
Phone
+98 44 3275 4961
Email
jafarizadeh@umsu.ac.ir
Web page address
<http://nurse.umsu.ac.ir>

Person responsible for scientific inquiries

Contact

Name of organization / entity
School of Nursing and Midwifery of Urmia
Full name of responsible person
Hossein Jafari zadeh
Position
Vice Chancellor for Education of Nursing and Midwifery Faculty of Urmia
Latest degree

Master
Other areas of specialty/work
Nursery
Street address
Department of Nursing. School of Nursing and Midwifery, Nazlou Campus, Urmia University of Medical
City
Urmia
Province
West Azarbaijan
Postal code
5756115335
Phone
+98 44 3275 4961
Email
jafarizadeh@umsu.ac.ir
Web page address
<http://nurse.umsu.ac.ir>

Person responsible for updating data

Contact

Name of organization / entity
School of Nursing and Midwifery of Urmia
Full name of responsible person
Hossein Jafarizadeh
Position
Vice Chancellor for Education of Nursing and Midwifery Faculty of Urmia
Latest degree
Master
Other areas of specialty/work
Nursery
Street address
Department of Nursing. School of Nursing and Midwifery, Nazlou Campus, Urmia University of Medical
City
Urmia
Province
West Azarbaijan
Postal code
5756115335
Phone
+98 44 3275 4961
Email
jafarizadeh@umsu.ac.ir
Web page address
<http://nurse.umsu.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

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