Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

A comparison of the conceptual map and the traditional lecture method on students' learning based on the VARK learning styles model

Protocol summary

Study aim

Comparison of the effects of the conceptual map and the lecture method on nursing students' learning based on the VARK learning styles model

Design

In this randomized controlled study, two arm parallel group, 160 students with four different learning styles were randomly assigned to the intervention (conceptual map) or control (traditional lecture) groups by pulling cards from a box.

Settings and conduct

This study was performed in a nursing and midwifery school in the east of Iran during the second academic semester of 2017. 160 students with four different learning styles were selected using convenience sampling method and were randomly assigned to the intervention (teaching based on conceptual map) or control (teaching based on traditional lecture) groups. After the completion of the six teaching sessions, the post-assessment of students in all the groups was performed at the same time in order to compare the effect of educational methods related to all the four learning styles.

Participants/Inclusion and exclusion criteria

The inclusion criteria were as follows: Those who were enrolled in medical-surgical nursing course with a focus on hepatic disorders; had no prior knowledge of concept map method. The exclusion criteria were as follows: Students who had passed the course and were absent from in more than one session were excluded from the study.

Intervention groups

The intervention group: in this group, students were taught, medical surgical nursing course, by the conceptual map method during six weeks. The control group: in this group, students were taught, medical surgical nursing course, by the traditional lecture method during six weeks.

Main outcome variables

Facilitation of deeper learning for students based on their different learning styles

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20140409017197N3**
Registration date: **2018-10-28, 1397/08/06**
Registration timing: **retrospective**

Last update: **2018-10-28, 1397/08/06**
Update count: **0**

Registration date

2018-10-28, 1397/08/06

Registrant information

Name

Sara Amanian

Name of organization / entity

Nursing and Midwifery School of Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2016-11-21, 1395/09/01

Expected recruitment end date

2017-08-23, 1396/06/01

Actual recruitment start date

2016-11-21, 1395/09/01

Actual recruitment end date
2017-08-23, 1396/06/01
Trial completion date
2017-08-23, 1396/06/01

Scientific title
A comparison of the conceptual map and the traditional lecture method on students' learning based on the VARK learning styles model

Public title
A comparison of the conceptual map and the traditional lecture method on students' learning based on the VARK learning styles model
Purpose
Education/Guidance
Inclusion/Exclusion criteria
Inclusion criteria:
Those who were enrolled in medical-surgical nursing course with a focus on hepatic disorders Those who had no prior knowledge of concept map method
Exclusion criteria:
Students who had passed the medical surgical nursing course (with a focus on hepatic disorders) previously
Age
No age limit
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **160**
Actual sample size reached: **160**
Randomization (investigator's opinion)
Randomized
Randomization description
Students were selected using convenience method and they were randomly assigned to the intervention (taught by the conceptual map method) and control (taught by the traditional lecture method) groups. Random assignments were accomplished by pulling a group-assignment card from a box by each student.
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
Ethics committee of Iranshahr University of Medical Sciences
Street address
Balooch Blvd., Iranshahr University of Medical Sciences
City
Iranshahr
Province
Sistan-va-Balouchestan
Postal code
9914786138
Approval date
2016-07-02, 1395/04/12
Ethics committee reference number
IR.IRSHUMS.REC.1395.8

Health conditions studied

1

Description of health condition studied
Learning based on teaching methods
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Learning based on different teaching methods with regard to learning styles
Timepoint
Before and after intervention for each group
Method of measurement
a researcher-made pre and post-assessment questionnaire including 20 questions in the domain of knowledge and 20 questions related to the domain of meaningful learning

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: In this group, students were taught medical surgical nursing course, by the conceptual map method during six weeks.
Category
Other

2

Description
Control group: In this group, students were taught medical surgical nursing course, by the traditional lecture method during six weeks.

Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Faculty of Nursing and Midwifery, Iranshahr, Iran
Full name of responsible person
Vahideh Pouyesh
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Balooch Blvd., Iranshahr University of Medical Sciences
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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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
Iranshahr 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
Sara
Position
Graduated srudent
Latest degree
Master
Other areas of specialty/work
Nursery
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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

Not applicable

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

Not applicable

Data Dictionary

Not applicable