Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

The Effect of Inhalation Aromatherapy with Lavender Essential Oil on Death Anxiety and Sleep Quality in Emergency Department Nurses

Protocol summary

Study aim
To examine the effect of inhalation aromatherapy with lavender essential oil on death anxiety and sleep quality in emergency department nurses

Design
This is a randomized, single-blind, controlled, parallel-group study to evaluate the effect of lavender aromatherapy versus paraffin on death anxiety and sleep quality of nurses (N=64).

Settings and conduct
Sixty-four emergency nurses working at hospitals will be randomly assigned to either the experimental group or the control group. The outcome assessor will be blinded to the allocated intervention.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Being willing to participate in the study; being a registered nurse; having a minimum of 6 months of work experience in emergency departments; having a mobile phone. Exclusion criteria: Having a history of being allergic to lavender; having a history of being allergic to essential oils and perfumes; being pregnant and breastfeeding; taking sedatives and hypnotics; being addicted to drugs and alcohol; suffering from acute respiratory diseases, dyspnea, or chronic cough; using any form of aromatherapy with essential oils; simultaneously participating in other studies.

Intervention groups
The experimental and control groups will receive bottles containing the required amount of lavender oil and paraffin, respectively. For two weeks, the experimental group will drip 2 drops of lavender oil on a cotton ball every night before going to sleep, take 2-3 deep breaths, and then attach the cotton ball to the collar of their clothes at a distance of 10 cm from their nose. The control group will also drip 2 drops of paraffin on a cotton ball every night for two weeks before going to sleep, take 2-3 deep breaths, and then attach the cotton ball to the collar of their clothes at a distance of 10 cm from their nose.

Main outcome variables
Death anxiety

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20210523051370N8**
Registration date: **2023-02-12, 1401/11/23**
Registration timing: **prospective**

Last update: **2023-02-12, 1401/11/23**
Update count: **0**
Registration date
2023-02-12, 1401/11/23

Registrant information
Name
Seyed Afshin Shorofi
Name of organization / entity
Country
Iran (Islamic Republic of)
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Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2023-02-14, 1401/11/25
Expected recruitment end date
2023-04-04, 1402/01/15
Actual recruitment start date
empty
Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The Effect of Inhalation Aromatherapy with Lavender Essential Oil on Death Anxiety and Sleep Quality in Emergency Department Nurses

Public title
The Effect of Lavender Aromatherapy on Nurses' Death Anxiety and Sleep Quality

Purpose
Supportive

Inclusion/Exclusion criteria

Inclusion criteria:
Being willing to participate in the study Being a registered nurse Having a minimum of 6 months of work experience in emergency departments Having a mobile phone

Exclusion criteria:
Having a history of being allergic to lavender Having a history of being allergic to essential oils and perfumes Being pregnant and breastfeeding Taking sedatives and hypnotics Being addicted to drugs and alcohol Suffering from acute respiratory diseases, dyspnea, or chronic cough Using any form of aromatherapy with essential oils Simultaneously participating in other studies

Age
No age limit

Gender
Both

Phase
N/A

Groups that have been masked

- Investigator
- Outcome assessor

Sample size
Target sample size: **64**

Randomization (investigator's opinion)
Randomized

Randomization description
Sixty-four nurses will be randomly assigned to either the experimental group or the control group. The randomization sequence will be computer generated with the permuted block technique and a 1:1 allocation ratio with allocations concealed in sealed, opaque, sequentially numbered envelopes.

Blinding (investigator's opinion)
Single blinded

Blinding description
The outcome assessor will be blinded to the allocated intervention. Nurses will be advised not to share it with the outcome assessor if they identify the intervention being received (lavender oil or paraffin). Glass bottles containing lavender oil and paraffin will be identical in size, color and shape, being prepared by a person not aware of the research objectives. The same person will deliver the bottles to the nurses of the two groups.

Placebo
Used

Assignment
Parallel

Other design features
The experimental group will receive dark colored bottles containing the required amount of lavender oil (Lavandula angustifolia) procured from the Barij Essence Pharmaceutical Company (Kashan, Iran) along with a dropper. The control group will also receive dark colored bottles containing the required amount of paraffin along with a dropper. For two weeks, the experimental group will drip 2 drops of lavender oil on a cotton ball every night before going to sleep, take 2-3 deep breaths, and then attach the cotton ball to the collar of their clothes at a distance of 10 cm from their nose. The control group will also drip 2 drops of paraffin on a cotton ball every night for two weeks before going to sleep, take 2-3 deep breaths, and then attach the cotton ball to the collar of their clothes at a distance of 10 cm from their nose.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Bioethics Committee of Mazandaran University of Medical Sciences

Street address
Moalem Square, Sari, Mazandaran Province

City
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4815733971

Approval date
2022-10-22, 1401/07/30

Ethics committee reference number
IR.MAZUMS.REC.1401.351

Health conditions studied

1

Description of health condition studied
Death Anxiety

ICD-10 code
F06.4

ICD-10 code description
Anxiety disorder due to known physiological condition

2

Description of health condition studied
Sleep quality

ICD-10 code
F51

ICD-10 code description
Sleep disorders not due to a substance or known

physiological condition

Primary outcomes

1

Description
Death anxiety
Timepoint
T0 (before the intervention); Time 1 (end of the first week with aromatherapy); Time 2 (end of the second week with aromatherapy);- Follow-up (end of the third week)
Method of measurement
Death Anxiety Scale

Secondary outcomes

1

Description
Sleep quality
Timepoint
T0 (before the intervention); Time 1 (end of the first week with aromatherapy); Time 2 (end of the second week with aromatherapy); Follow-up (end of the third week)
Method of measurement
Pittsburgh Sleep Quality Index

Intervention groups

1

Description
Intervention group: The experimental group will receive bottles containing the required amount of lavender oil along with a dropper. For two weeks, they will drip 2 drops of lavender oil on a cotton ball every night before going to sleep, take 2-3 deep breaths, and then attach the cotton ball to the collar of their clothes at a distance of 10 cm from their nose.
Category
Other

2

Description
Control group: The control group will receive bottles containing the required amount of paraffin along with a dropper. For two weeks, they will drip 2 drops of paraffin on a cotton ball every night before going to sleep, take 2-3 deep breaths, and then attach the cotton ball to the collar of their clothes at a distance of 10 cm from their nose.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Fatemeh Zahra Hospital
Full name of responsible person
Dr. Seyed Afshin Shorofi
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3

Recruitment center
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4

Recruitment center

Name of recruitment center
Bu-Ali Sina Hospital

Full name of responsible person
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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
Mazandaran 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
Mazandaran University of Medical Sciences

Full name of responsible person
Dr Seyed Afshin Shorofi

Position
Assistant Professor

Latest degree
Ph.D.

Other areas of specialty/work
Complementary and Integrative Medicine

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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
To keep sample data confidential
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
Not applicable
Analytic Code
Not applicable
Data Dictionary
Not applicable