

Clinical Trial Protocol

Iranian Registry of Clinical Trials

18 Sep 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)

Phone

+98 11 3336 7342

Email address

ashorofi@yahoo.com

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

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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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Fatemeh Zahra Hospital, Artesh Boulevard

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Recruitment center

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3

Recruitment center

Name of recruitment center

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Full name of responsible person

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4

Recruitment center

Name of recruitment center

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Full name of responsible person

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Sponsors / Funding sources

1

Sponsor**Name of organization / entity**

Mazandaran University of Medical Sciences

Full name of responsible person

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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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Latest degree

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Person responsible for updating data

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Full name of responsible person

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Latest degree

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Other areas of specialty/work

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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