# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

07 Nov 2026

## Comparison of the effect of lavender and chamomile scent on anxiety in patients who are candidates for angiography

### Protocol summary

**Study aim**
Determining and comparing the effects of lavender and chamomile scents on reducing anxiety in patients undergoing angiography.

**Design**
The clinical trial has a control group with parallel and randomized groups, and Randomization Maine software was used for randomization.

**Settings and conduct**
The population studied in this study includes all patients who are candidates for angiography with moderate to severe anxiety, referring to Prophet Azam Hospital, Bandar Abbas in 1403. The relevant intervention will be performed in the angiography department of Prophet Azam Hospital. After assigning individuals to groups, the level of latent and overt anxiety of individuals will be measured using the Spielberger questionnaire, and then 20 minutes after the intervention, the Spielberger questionnaire will be completed and collected again to measure the anxiety of the sample individuals.

**Participants/Inclusion and exclusion criteria**
1- Having informed consent 2- Age range 18 to 65 years 3- Having full consciousness 4- Absence of any allergy to medicinal plants 5- Patients who are candidates for coronary angiography for the first time 6- No other invasive procedures before angiography 7- Absence of taking sedatives 4 hours before the intervention

**Intervention groups**
About an hour before angiography, for the lavender aromatherapy group, 2 drops of 10% lavender essential oil will be poured onto a piece of cloth and pinned 20 centimeters from the patients' noses. In the chamomile aromatherapy group, the same procedure will be performed, and in the placebo group, the same procedure will be performed with distilled water. Then, immediately 20 minutes after the intervention, the patients' anxiety level will be measured again, and finally, the results of the interventions before and after the intervention will be analyzed and compared.

**Main outcome variables**
anxiety

### General information

**Reason for update**
**Acronym**
**IRCT registration information**
IRCT registration number: **IRCT20250111064343N1**
Registration date: **2025-03-10, 1403/12/20**
Registration timing: **prospective**

Last update: **2025-03-10, 1403/12/20**
Update count: **0**

**Registration date**
2025-03-10, 1403/12/20

**Registrant information**
**Name**
Niloofar Rabani
**Name of organization / entity**
**Country**
Iran (Islamic Republic of)
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**Recruitment status**
**Recruitment complete**
**Funding source**

**Expected recruitment start date**
2025-04-05, 1404/01/16
**Expected recruitment end date**
2025-06-06, 1404/03/16
**Actual recruitment start date**
empty
**Actual recruitment end date**
empty

**Trial completion date**
empty

**Scientific title**
Comparison of the effect of lavender and chamomile scent on anxiety in patients who are candidates for angiography

**Public title**
Investigating the effect of aromatherapy on the anxiety of patients who are candidates for angiography

**Purpose**
Prevention

**Inclusion/Exclusion criteria**

**Inclusion criteria:**
Having informed consent Age range from 18 to 65 years Having complete alertness Absence of any allergy to medicinal plants Candidate patients for coronary angiography for the first time Failure to perform other invasive procedures before angiography (such as echocardiography through the esophagus) Absence of valvular heart disease, any olfactory and respiratory problems, drug addiction, liver and kidney problems. Not taking sedative drugs 4 hours before the intervention

**Exclusion criteria:**
Unwillingness to participate in the study History of any confirmed mental illness, such as depression and anxiety The occurrence of any cardiac dysrhythmias and changes in vital signs and hemodynamics

**Age**
From **18 years** old to **65 years** old

**Gender**
Both

**Phase**
N/A

**Groups that have been masked**

- Participant

**Sample size**
Target sample size: **150**

**Randomization (investigator's opinion)**
Randomized

**Randomization description**
The sampling method of this study is non-probability. In this way, patients who meet the inclusion criteria and complete the consent form to participate in the study will be considered as the study sample of this study until the desired number of samples is completed. Then, using the random block method (selection of 10 blocks of 15), we allocate the sample individuals to one of the three study groups (lavender, chamomile, or placebo) according to the random sequence table extracted in the Randomization Maine software at the Internet address https://www.randomizer.org/.

**Blinding (investigator's opinion)**
Single blinded

**Blinding description**
Single-blinding in this study means that the participants simply do not know which scent they will be exposed to. (While the patients are able to identify the scents, they do not know which particular scent is the active intervention being tested.)

**Placebo**
Used

**Assignment**
Parallel

**Other design features**

## Secondary Ids

empty

## Ethics committees

### 1

**Ethics committee**

**Name of ethics committee**
Ethics Committee of Hormozgan University of Medical Sciences

**Street address**
Nursing and Midwifery Faculty, Hormozgan University of Medical Sciences , Beginning of Imam Hossein Boulevard

**City**
Bandarabbas

**Province**
Hormozgan

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7919693116

**Approval date**
2025-01-08, 1403/10/19

**Ethics committee reference number**
IR.HUMS.REC.1403.307

## Health conditions studied

### 1

**Description of health condition studied**
Anxiety of angiography patients

**ICD-10 code**
I25.10

**ICD-10 code description**
Atherosclerotic heart disease of native coronary artery without angina pectoris

## Primary outcomes

### 1

**Description**
Anxiety level of angiography candidate patients

**Timepoint**
Measuring the anxiety level of angiography candidate patients before the intervention and twenty minutes after the intervention

**Method of measurement**
Spielberger's overt and covert anxiety test questionnaire, whose validity and reliability have been confirmed

## Secondary outcomes

empty

## Intervention groups

### 1

**Description**

Intervention group: First intervention group (aromatherapy with lavender essential oil): After assigning individuals to the intervention and placebo groups, the level of latent and overt anxiety will be measured using the Spielberger questionnaire. The second step: About an hour before angiography, for the lavender aromatherapy group, 2 drops of 10% lavender essential oil (provided by Barij Essential Oil Company) will be poured onto a 10 x 10 cm piece of cloth using a dropper and pinned to the patients' shirts 20 cm from their noses. Then, immediately 20 minutes after the intervention, the patients' level of anxiety will be measured again using the Spielberger questionnaire, and the data will be collected and analyzed. Finally, the results of the interventions between the groups, as well as before and after the intervention, will be analyzed and compared.

**Category**

Prevention

### 2

**Description**

Intervention group: Second intervention group (aromatherapy with chamomile essential oil): After assigning individuals to the intervention and placebo groups, the level of latent and overt anxiety will be measured using the Spielberger questionnaire. The second step is that about an hour before angiography, for the aromatherapy with chamomile essential oil group, 2 drops of 10% chamomile essential oil will be poured onto a 10 x 10 cm piece of cloth using a dropper and pinned to the patients' shirts at a distance of 20 cm from their noses. Then, immediately 20 minutes after the intervention, the patients' level of anxiety will be measured again using the Spielberger questionnaire, and data will be collected and analyzed. Finally, the results of the interventions between the groups, as well as before and after the intervention, will be analyzed and compared.

**Category**

Prevention

### 3

**Description**

Control group: (Aromatherapy with distilled water): After assigning individuals to the intervention and placebo groups, the level of latent and overt anxiety will be measured using the Spielberger questionnaire. The second step is that about an hour before angiography, for the placebo group, 2 drops of distilled water will be poured onto a 10 x 10 cm piece of cloth using a dropper and pinned to their shirt 20 cm from the patients' noses. Then, immediately 20 minutes after the intervention, the patients' level of anxiety will be measured again using the Spielberger questionnaire, and the data will be collected and analyzed. Finally, the results of the interventions between the groups, as well as before and after the intervention, will be analyzed and compared.

**Category**

Prevention

## Recruitment centers

### 1

**Recruitment center**

**Name of recruitment center**
Payambar azam hospital

**Full name of responsible person**
Aref Faghih

**Street address**
Islamic Republic Boulevard, opposite the Municipality of District 3, payambar azam's Educational and Medical Complex

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## Sponsors / Funding sources

### 1

**Sponsor**

**Name of organization / entity**
Bandare-abbas University of Medical Sciences

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Shahram Zare

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**Grant name**

**Grant code / Reference number**

**Is the source of funding the same sponsor organization/entity?**

No

**Title of funding source**

Bandare-abbas 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**
Bandare-abbas University of Medical Sciences

**Full name of responsible person**
Niloofar Rabbani

**Position**
Nursing master's student

**Latest degree**
Bachelor

**Other areas of specialty/work**
Nursery

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## Person responsible for scientific inquiries

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Ph.D.

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Health Promotion

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## Person responsible for updating data

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## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**
Yes - There is a plan to make this available

**Study Protocol**
Yes - There is a plan to make this available

**Statistical Analysis Plan**
Yes - There is a plan to make this available

**Informed Consent Form**
Yes - There is a plan to make this available

**Clinical Study Report**
Yes - There is 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**
No - There is not a plan to make this available

**Title and more details about the data/document**
Only information about the outcome

**When the data will become available and for how long**
Since 1403

**To whom data/document is available**
The data will be available to all healthcare researchers.

**Under which criteria data/document could be used**
It will be used for research and educational purposes.

**From where data/document is obtainable**

Ms. Niloofar Rabbani, a senior student of surgical nursing at Hormozgan University of Medical Sciences, can be reached via email at niloo.rbn1998@gmail.com and phone number 09301850138.

**What processes are involved for a request to access data/document**

Access to the data file will be possible by sending a request to the author's email.

**Comments**