

Clinical Trial Protocol

Iranian Registry of Clinical Trials

30 May 2026

Investigating the effect of citrus aurantium inhalation essential oil on students' exam anxiety

Protocol summary

Study aim

Investigating the effect of Citrus aurantium inhalation essential oil on students' anxiety

Design

This research has a control and intervention group, three blind groups, randomized on 80 students. Random allocation software is used for randomization.

Settings and conduct

This study is about reducing students' Test anxiety. The research community consists of all nursing students. Blinding includes the participants, the outcome assessor and the statistical analyst, who are unaware of the type of groups. Before the exam, the TAI is completed by the intervention and control groups. Intervention is done. After the end of the exam, the TAI is completed again by both groups.

Participants/Inclusion and exclusion criteria

Do not have an olfactory disorder. Do not have a history of allergy to the scent of spring flowers. Do not have any underlying diseases such as heart problems, respiratory problems, epilepsy, diseases and skin allergies. Not being treated with sedatives or self-administered sedatives. They have not used other relaxation methods before the test. No unfortunate accident or change in emotional relationships, etc. since one month before and during the study. Non-entry conditions:

Intervention groups

Intervention: It is mixed with a ratio of 0.1 ml (spring orange) and 1.9 (ordinary water) and poured into the tank of the humidifier and we turn on the humidifier. The humidifier spreads the solution in the air for 15 minutes. Before the test and intervention, the test anxiety inventory (TAI) is completed by the students. Immediately after the test, the is completed by the TAI students. Control : The procedure is completely similar to the intervention group. But the tank of the humidifier is only filled with tap water.

Main outcome variables

reducing students' test anxiety; quality of education of

students; Increasing the quality of social life of students

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230110057097N1**

Registration date: **2023-02-07, 1401/11/18**

Registration timing: **registered_while_recruiting**

Last update: **2023-02-07, 1401/11/18**

Update count: **0**

Registration date

2023-02-07, 1401/11/18

Registrant information

Name

Seyed mehdi Hosseinfard

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 933 668 3428

Email address

mhoseinfard92@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-01-23, 1401/11/03

Expected recruitment end date

2023-02-18, 1401/11/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Investigating the effect of citrus aurantium inhalation essential oil on students' exam anxiety

Public title

Investigating the effect of citrus aurantium inhalation essential oil on students' exam anxiety

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Dont have an olfactory disorder. Do not have a history of allergy to the scent of spring flowers. Do not have any underlying diseases such as heart problems, respiratory problems, epilepsy, diseases and skin allergies. Not being treated with sedatives or self-administered sedatives. They have not used other relaxation methods before the test. No unfortunate accident or change in emotional relationships, etc. since one month before and during the study.

Exclusion criteria:

Unwillingness to continue cooperation The student feels uncomfortable during the intervention.

Age

From **18 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor
- Data analyser

Sample size

Target sample size: **80**

Randomization (investigator's opinion)

Randomized

Randomization description

Based on the size of the study sample and using the random number allocation table, 80 codes from one to eighty are assigned to the students. Even numbers are considered for the intervention group and odd numbers are considered for the control group, and in this way, the students are divided into two groups. intervention and control.

Blinding (investigator's opinion)

Double blinded

Blinding description

In this study, blinding includes the statistical analyst and the outcome evaluator, who are unaware of the type of groups and the type of materials used.

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research ethics committee of Islamic Azad University, Behbahan branch

Street address

Amirkabir Blvd., Behbahan

City

Bebahan

Province

Khuzestan

Postal code

۶۳۶۱۷۱۳۱۹۸

Approval date

2023-01-22, 1401/11/02

Ethics committee reference number

IR.IAU.BEHBAHAN.REC.1401.023

Health conditions studied

1

Description of health condition studied

Test anxiety

ICD-10 code

F40

ICD-10 code description

Phobic anxiety disorders

Primary outcomes

1

Description

Reducing test anxiety in students

Timepoint

15 minutes before the start of the test to the end of the test

Method of measurement

test anxiety inventory(TAI)

Secondary outcomes

empty

Intervention groups

1

Description

A humidifier is placed in the room.The door and window of the class will be closed 15 minutes before the start of aromatherapy. It is mixed with a ratio of 0.1 ml (spring orange) and 1.9 (ordinary water) and poured into the tank of the humidifier and we turn on the humidifier.The humidifier spreads the solution in the air for 15 minutes.The door and window of the classroom will not be opened until the end of the exam.Before the test and intervention, the test anxiety inventory is completed by

the students. Immediately after the test, the test anxiety inventory is completed by the students.

Category

Prevention

2

Description

Control group: A humidifier is placed in the room. The door and window of the classroom are closed 15 minutes before the start of aromatherapy. Only plain water is poured into the humidifier tank. We turn on the humidifier. The humidifier spreads the solution in the air for 15 minutes. The door and window of the classroom will not be opened until the end of the exam. Before the exam and intervention, the test anxiety questionnaire is completed by the students. Immediately after the test, the test anxiety questionnaire is completed by the students.

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Behbahan Islamic Azad University, Nursing faculty

Full name of responsible person

Seyed Mehdi Hosseinfard

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Fadaeiyan Islam blvd., Farrokshahr

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

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?

No

Title of funding source

Vice-Chancellor's Office for Research of Islamic Azad university, Behbahan branch

Proportion provided by this source

1

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

Islamic Azad University

Full name of responsible person

Seyed Mehdi Hosseinfard

Position

Faulty member of Nursing department

Latest degree

Master

Other areas of specialty/work

Nursery

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Latest degree

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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

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