Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

The effect of music therapy and acupressure on sleep quality and blood glucose level in hospitalized patients in critical care units

Protocol summary

Study aim
Determining the effect of music therapy and acupressure on sleep quality and blood glucose level of patients admitted to critical care units

Design
In this parallel clinical trial with the control group, phase 3 of the clinical trial, 60 patients who are eligible to participate in the study (hospitalization in the past 72 hours, sufficient consciousness, no contagious and skin disease) are randomly assigned to intervention and control groups in a block-wise manner. First, the quality of sleep the night before and blood glucose are assessed. Then, for the intervention group, 30 minutes of music and acupressure are used one hour before sleep, and for the control group, routine is used. In the morning, the quality of sleep of the patients and the blood glucose should be assessed by a person who is unaware of grouping the patients. Then, the results in the two groups are compared.

Settings and conduct
For patients admitted to critical care units, 30 minutes of music before sleep is used along with an acupressure band. The next day, sleep quality and blood glucose are measured by an individual who is unaware of the patients' grouping.

Participants/Inclusion and exclusion criteria
Among patients admitted to critical care units, patients who are conscious enough to complete the questionnaires, are between 18 and 85 years old, have been admitted to the critical care unit in the past 72 hours, do not have any contagious diseases, and do not have hearing or skin problems to receive the intervention will be included in the study.

Intervention groups
Playing the patient's preferred music using headphones for 30 minutes one to two hours before sleep and using acupressure bands on the Nigan point (P6) of both hands from the time the music was played until the next morning for patients in the intervention group.

Main outcome variables
sleep quality, blood glucose

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20110514006481N17**
Registration date: **2026-05-18, 1405/02/28**
Registration timing: **prospective**

Last update: **2026-05-18, 1405/02/28**
Update count: **0**
Registration date
2026-05-18, 1405/02/28

Registrant information
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Recruitment status
recruiting
Funding source

Expected recruitment start date
2026-06-22, 1405/04/01
Expected recruitment end date
2028-04-20, 1407/02/01
Actual recruitment start date
empty
Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of music therapy and acupressure on sleep quality and blood glucose level in hospitalized patients in critical care units

Public title

Effect of music and acupressure on sleep quality and blood glucose in critical care patients

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Admission to critical care unit in the past 72 hours Ability to communicate Willingness to participate in the study

Exclusion criteria:

Contagious disease Hearing disorder Diffuse skin disorders Hemodynamic instability

Age

From **18 years** old to **85 years** old

Gender

Both

Phase

3

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization is done using stratified permuted block randomization. Patients are divided into groups according to age (>65 years and <65 years) and gender (male, female). For each stratum, a separate random assignment continues to reach the sample size. For random assignment in each stratum, six blocks of (A, B), which include different states of test and control sequences (AABBAA, ABABAB, ...), are used. Block selection and randomization is done with website (URL: https://www.sealedenvelope.com).

Blinding (investigator's opinion)

Single blinded

Blinding description

The patients in the study and the researcher are aware of the study grouping, but the person who measures the study outcomes the next day is unaware of the grouping of patients in the study.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Semnan University of Medical Sciences

Street address

Nursing and Midwifery Faculty, Semnan University of Medical Sciences, 5th Km Damghan road, Semnan, Iran

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Province

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Postal code

3513138111

Approval date

2026-04-27, 1405/02/07

Ethics committee reference number

IR.SEMUMS.REC.1405.009

Health conditions studied

1

Description of health condition studied

Sleep disorder

ICD-10 code

F51

ICD-10 code description

Sleep disorders not due to a substance or known physiological condition

Primary outcomes

1

Description

Sleep quality

Timepoint

The morning of the study and the next day

Method of measurement

Richards-Campbell Sleep Questionnaire

2

Description

Blood glucose

Timepoint

The morning of the study and the next day

Method of measurement

Glucometer

Secondary outcomes

1

Description

Hospital Anxiety and Depression

Timepoint
The morning of the study and the next day
Method of measurement
Hospital Anxiety and Depression Scale

Intervention groups

1

Description
Intervention group: Listening to selected music for 30 minutes before sleep along with using an acupressure band during sleeping
Category
Prevention

2

Description
Control group: Routine care before sleeping
Category
Prevention

Recruitment centers

1

Recruitment center
Name of recruitment center
Koosar hospital in Semnan
Full name of responsible person
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Sponsors / Funding sources

1

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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
Semnan 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
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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
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
No - There is not a plan to make this available
Analytic Code
No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available