

# Effect of self-help mindfulness-based stress reduction exercise therapeutics on the psychological status and sleep quality of Hubei medical staff

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<b>Registration date</b> 11/06/2025	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 10/07/2025	<b>Condition category</b> Mental and Behavioural Disorders	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Research indicates that mindfulness-based training can improve the psychological health of nurses, but there is a lack of conclusive evidence.

This study aims to explore the effect of mindfulness-based stress reduction exercise therapy (MBSRET) on the psychological status and sleep quality of medical staff and to provide evidence for its application in mental health care for medical staff in public health emergencies.

### Who can participate?

Medical staff aged over 18 years who were sent to support the pandemic prevention and control in Hubei Province

### What does the study involve?

The intervention group received MBSRET for 8 weeks, and the control group received routine care.

The MBSRET intervention consisted of two components: mindfulness and physical exercise. The mindfulness component was based on the MBSR programme. It includes 8 weekly meetings, each lasting for 2.5 hours, and a single-day retreat. The programme taught various mindfulness practices: body scanning, mindful breathing and movement, sitting meditation and loving-kindness meditation. The participants were instructed to practice these exercises at home or work for at least 30 minutes every day, 6 days per week, with the guidance of the MBSRET mobile application. The mobile application was developed by the research team based on the MBSR curriculum and existing mindfulness applications. It provided audio recordings, videos, texts and images to guide the participants through the exercises. The application also recorded the participants' compliance, duration of exercise and feedback.

The physical exercise component was based on the American College of Sports Medicine (ACSM) guidelines for physical activity and health. The ACSM guidelines suggest that adults should perform at least 150 minutes of moderate-intensity aerobic exercise, 75 minutes of vigorous-intensity aerobic exercise or a combination of both each week. Further recommendations

included performing muscle-strengthening activities involving all the major muscle groups at least 2 days per week. The participants were instructed to choose their types and modes of physical exercise according to their preferences, abilities and schedules. They were advised to perform physical exercise for at least 30 minutes each day, 5 days per week, at a moderate-to-vigorous intensity level with the guidance of the MBSRET mobile application. The mobile application provided various options, suggestions and tips for physical exercise; it also recorded the participants' compliance, duration and intensity of exercise and feedback.

The control group received routine care, which included the standard medical care and psychological support provided by the local health authorities and hospitals. They did not receive any specific interventions or instructions regarding mindfulness or physical exercise. They were also asked to use the MBSRET mobile application, but only to complete the outcome measures and provide basic demographic and clinical information.

What are the possible benefits and risks of participating?

Participants' mental state and sleep may improve. There are no risks.

Where is the study run from?

Beijing Chao-Yang Hospital, Capital Medical University (China)

When is the study starting and how long is it expected to run for?

December 2019 to April 2020

Who is funding the study?

Investigator initiated and funded

Who is the main contact?

Shuqin Wang, wang\_shuqin06@126.com

## Contact information

### Type(s)

Public, Scientific, Principal investigator

### Contact name

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## Additional identifiers

### Clinical Trials Information System (CTIS)

Nil known

**ClinicalTrials.gov (NCT)**

Nil known

**Protocol serial number**

Nil known

## Study information

**Scientific Title**

Effect of self-help mindfulness-based stress reduction exercise therapeutics on the psychological status and sleep quality of Hubei medical staff

**Acronym**

DR

**Study objectives**

Mindfulness-based stress reduction exercise therapy (MBSRET) may effectively improve the psychological status and sleep quality of the medical staff.

**Ethics approval required**

Ethics approval required

**Ethics approval(s)**

approved 20/12/2019, Ethics Committee of Beijing Chao-Yang Hospital, Capital Medical University (GongTi Southern No. 8, Chaoyang District, Beijing, 100020, China; +86 (0)10 85231484; cyylunli2019@163.com), ref: 2024-K-869

**Study design**

Single-center interventional double-blind randomized controlled trial

**Primary study design**

Interventional

**Study type(s)**

Other

**Health condition(s) or problem(s) studied**

Psychological status and sleep quality

**Interventions**

The intervention group received MBSRET for 8 weeks, and the control group received routine care. The participants are randomly assigned to either the intervention group or the control group using a computer-generated random number table. Members of the research team (researchers) are responsible for recruitment, randomization, intervention, and evaluation. In order to avoid the influence of the subjective will of researchers, the researchers responsible for the evaluation work do not participate in recruitment, randomization, intervention and other work, which are completed by other researchers.

The MBSRET intervention consisted of two components: mindfulness and physical exercise. The mindfulness component was based on the MBSR programme. It includes 8 weekly meetings,

each lasting for 2.5 hours, and a single-day retreat. The programme taught various mindfulness practices: body scanning, mindful breathing and movement, sitting meditation and loving-kindness meditation. The participants were instructed to practice these exercises at home or work for at least 30 minutes every day, 6 days per week, with the guidance of the MBSRET mobile application. The mobile application was developed by the research team based on the MBSR curriculum and existing mindfulness applications. It provided audio recordings, videos, texts and images to guide the participants through the exercises. The application also recorded the participants' compliance, duration of exercise and feedback.

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### **Intervention Type**

Behavioural

### **Primary outcome(s)**

1. Psychological status measured using the Symptom Checklist-90 (SCL-90) at baseline and 8 weeks
2. Sleep quality measured using the Perceived Stress Scale (PSS) and the Pittsburgh Sleep Quality Index (PSQI) at baseline and 8 weeks

### **Key secondary outcome(s)**

There are no secondary outcome measures

### **Completion date**

30/04/2020

## **Eligibility**

### **Key inclusion criteria**

1. Over 18 years old
2. Able to access the internet and use the MBSRET mobile application

### **Participant type(s)**

Health professional

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Upper age limit**

65 years

**Sex**

All

**Total final enrolment**

85

**Key exclusion criteria**

1. Having a history of mental illness or receiving psychological treatment
2. Having a physical condition that prevents performing physical exercise
3. Being pregnant or lactating

**Date of first enrolment**

05/01/2020

**Date of final enrolment**

21/01/2020

**Locations****Countries of recruitment**

China

**Study participating centre**

**Beijing Chao-Yang Hospital**

GongTi Southern No. 8

Chaoyang District

Beijing

China

100020

**Sponsor information****Organisation**

Beijing Chao-Yang Hospital

ROR

<https://ror.org/01eff5662>

## Funder(s)

**Funder type**

Other

**Funder Name**

Investigator initiated and funded

## Results and Publications

**Individual participant data (IPD) sharing plan**

The datasets generated during and/or analysed during the current study are not expected to be made available due to personal privacy issues.

**IPD sharing plan summary**

Not expected to be made available

**Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>		23/06/2025	10/07/2025	Yes	No