

App-delivered Sleep ThERapy for Older IndiViDuals with insomnia (ASTEROID STUDY)

PART B: RANDOMISED CONTROLLED TRIAL

PARTICIPANT INFORMATION SHEET AND CONSENT FORM

Introduction

You are invited to take part in a research study for people with insomnia. In this study, we aim to treat your insomnia using a mobile phone application called SleepFix which has been developed by researchers from the Woolcock Institute of Medical Research and The University of Sydney who will be running this study. The researchers have contracted software company *Saje Mind Pty Ltd* for ongoing SleepFix app maintenance. This company has no influence on the writing of the study protocol or other study related material. They will have access to overall app usage data for the purpose of app maintenance and SleepFix development as required by the research teams at the Woolcock Institute and The University of Sydney. They will not have access to any study data.

The purpose of this study is to assess the efficacy of SleepFix in reducing insomnia symptoms in older adults from the community aged 60 years or over. SleepFix delivers digital Brief Behavioural Therapy for insomnia (dBBTi) by reducing excess time spent in bed. dBBTi is one component of the gold-standard Cognitive Behavioural Therapy for insomnia that is typically administered to treat insomnia in a clinical context. Everyone who participates in this study will be given access to the SleepFix therapy app on their smartphone, either during the course of the study or afterwards, depending on the randomised group you are allocated.

This research project will be undertaken remotely from the Woolcock Institute of Medical Research, Glebe, NSW. The study is being funded by the Cooperative Research Centre (CRC) for Alertness Safety and Productivity and sponsored by Woolcock Institute of Medical Research.

Participation in this research is voluntary. If you do not wish to take part, you do not have to. There will be no impact or consequence if you choose not to take part.

What does participation in this research involve?

This study will be conducted entirely remotely through a secure online platform, the SleepFix app and telephone calls; there are no face-to-face visits required.

Online Screening and Questionnaires

Assuming you are eligible you will be supplied with this Participant Information Sheet and Consent Form. Consent will be obtained digitally using text input fields and filling out your first and last name, email address and mobile number for a member of the research team to contact you during the study. Next, you will be asked to complete a series of baseline questionnaires, which will take approximately 20-25 minutes. Throughout the study you will be asked to repeat these questionnaires as per the study schedule (see Table 1 below):

Study Activity	Baseline (Wk 0)	Wk 3	Wk 8	Wk 16	Wk 26
Demographics	X				
eHealth Literacy Scale	X				
Insomnia Severity Index	X		X	X	X
Pittsburgh Sleep Quality Index	X		X	X	X
Patient Health Questionnaire – 9 item	X		X	X	X
Generalised Anxiety Disorder – 7 item	X		X	X	X
Flinders Fatigue Scale	X		X	X	X
European Quality of Life – 5 dimension	X		X	X	X
Epworth Sleepiness Scale	X		X	X	X
British Columbia Cognitive Complaints Inventory	X		X	X	X
Adverse Events Check-in		X	X		

Randomisation

You will be randomised either to the treatment group, who has immediate access to the SleepFix app or the control group who will have access to an online Sleep Health Education Package for the duration of the study and will receive access to the SleepFix app upon completion of the study.

Control Group:

If you are allocated to the control group, you will get free access to an online Sleep Health Education Package containing 3 modules about the importance of sleep, how poor sleep occurs as well as information to help improve sleep hygiene. These will be distributed bi-weekly but once available, access to modules will be unlimited to control participants. Upon completion of the final follow-up questionnaires (26 weeks) you will be invited to trial the SleepFix app.

Treatment Group:

The Treatment Group will be given continuous access to the SleepFix app. During onboarding, the group will learn about SleepFix, how the treatment works and how to use the app. Instructions of how to download the SleepFix app as well as a unique access code which will be used at registration once you download the app will also be given. If you are allocated to this treatment, you may also receive a Fitbit to use for the duration of the SleepFix therapy. You will need to supply an Australian postal address to receive the Fitbit.

Using SleepFix

Once you have installed SleepFix on your phone, you will need to register an account and enter your access code to proceed. To set up the program you will complete a short series of questions about your current sleep. Once started, it will only take approximately 2 minutes each day to complete the sleep diary entries in the SleepFix app, which are required for the therapy to progress. If selected to wear a Fitbit device on your non-dominant wrist, this should also be worn for the 6-week therapy window.

What do I have to do?

All participants will be required to complete 4 questionnaire batteries over the course of 26 weeks. In addition, the control arm will be required to read and refer to an online sleep health module every 2 weeks and will require no more than 10 minutes. On the other hand, the Treatment group will be required to use the SleepFix app involving daily diary entries for 6 weeks requiring no more than 5 minutes per day.

While completing the study, you are also responsible for:

- Following guidelines and directions from this information sheet and study staff
- Completing requirements of the study honestly and to your best ability
- Telling the study staff about any changes to your health during the study (see adverse events below)
- Not be part of any other sleep research study while participating in this study without first talking to the study staff.

Adverse Events

Throughout the study you are welcome to contact the research team if any new medical events or other occur while you are involved in the study. At weeks 3 and 8, you will be asked how you are feeling including questions about how your health may have changed since starting the study.

Additional Costs

There are no additional costs associated with participating in this research project other than your time.

Reimbursement

If you are allocated to the treatment group, you will be provided a free Fitbit at the onset of the study, which does not need to be returned. A \$15 gift card will also be offered for completion of questionnaires at week 6, as well as a \$20 and \$25 gift card at the completion of each set of follow-up questionnaires (week 16 and 26, respectively), as reimbursement for their time and commitment.

What are the possible benefits of taking part?

For those in the treatment group, your symptoms associated with your insomnia may improve while you take part in this study. It is possible that there will be no direct benefit to you from taking part, however, this study may help us to better understand the efficacy of the SleepFix app in older adults. The information from this research might also benefit others in the future.

What are the possible risks and disadvantages of taking part?

The most common side effect of this treatment is increased daytime fatigue and sleepiness, especially during the onset of the treatment. This has been reported to improve after two weeks and further improves following completion of the therapy. Therefore, it is advised that you do not drive or operate machinery unless you feel sufficiently alert to do so safely during the therapy. Please contact the SleepFix team if you would like more information.

What if I withdraw from this research project?

You also have the right to withdraw from the study at any time and for any reason. If you wish to withdraw from the study, please advise a member of the research study team. You may be asked to

complete a withdrawal of consent form to formalise your withdrawal. Any health risks or special requirements linked to withdrawing will be discussed with you.

If you do withdraw your consent during the study, there will be no additional information collected from you, although information already collected will be retained to ensure that the results of the study can be measured properly and to comply with clinical trial data storage requirements.

Can I have other treatments during this research project?

You may continue to take your regular medications or treatments you have been taking for any medical condition or for other reasons. It is important to tell the research staff about any treatments or medications for sleep you may be taking, including over-the-counter medications, vitamins or herbal remedies, acupuncture or other alternative treatments and any changes.

What will happen to information about me?

By indicating your consent, you will agree to the SleepFix research team collecting and using information for the research study. Any information obtained in connection with this research study is confidential and will be anonymised using a code number which will be stored electronically on a password-protected database on a secure server.

Data from the SleepFix app will be stored separately to online questionnaires data. All onboarding and survey data will be collected using a web-based SPARDAC database (Single Page Application - Research Data Capture) developed by Wappsystem Pty Ltd and hosted on Amazon Web Services (AWS) in Sydney, NSW, connected through the backend of the public-facing study website. Within this database, your study data will be anonymised and stored separately to your identifiable personal information such as contact details. These are only linked using a unique access code that is only available to certain staff who may be required to contact you.

The SleepFix app-based data is encrypted onto a mobile application web server hosted on Amazon Web Services in Sydney, NSW, using the highest level of encryption available for web browsers (256-bit Secure-Socket Layer). Your app data is only accessible to authorised staff who may need to make contact with you to assist with app usage.

These databases can only be linked using an access code at onboarding. The participant access code database is only accessible by authorised personnel. This ensures that your identifiable data cannot be linked to therapy data.

Your records may be reviewed by:

- Woolcock Institute of Medical Research - the study sponsor
- People who work with the sponsor on the study
- The University of Sydney
- Government agencies, such as the Australian Therapeutic Goods Administration (TGA)
- Sydney Local Health District HREC – the ethics committee that reviews and approves research studies,

These people may look at study records to ensure the study has been conducted in the correct way or for other reasons that are allowed under the law. By signing the Consent Form, you authorise release of, or access to, this confidential information to the relevant study personnel and regulatory authorities as noted above.

Permission to use your data for future research projects

Your data may be shared with other research collaborators who provide a methodologically sound proposal and sign a data access agreement. Your de-identified data may be shared with other local or international collaborators and used for future research purposes; however, Human Research Ethics Committee (HREC) approval will be sought prior to any future use of the data. You can indicate your agreement to this on the Consent Form.

Fitbit data

You may use a Fitbit in this research project and the objective sensor data is collected by the SleepFix app to complete the sleep diary and calculate the sleep window. **Fitbit has no involvement in the data analysis, interpretation and scientific writing of the study, nor do they have access to data generated by the SleepFix app or results of this study.**

As you are required to download the Fitbit mobile application to allow synching of sleep tracking data with the Sleepfix app, you will be subject to Fitbit's data sharing and privacy policy (this can be found at: <https://www.fitbit.com/global/au/legal/privacy-policy>).

Briefly, Fitbit receives usage and network activity information which includes information about user interaction with the services, for example pairing of devices, or interacting with an application on the Fitbit device. Fitbit also collects data about the devices and computers users use to access the Services, including IP addresses, browser type, language, operating system or mobile device information, and cookie information. Users can add or remove access to certain information through the Fitbit device or mobile device settings. Users are provided with privacy preferences in account settings and other tools to control how the information is visible to other users of the services. Fitbit will keep user account information, like name, email address, and password, for as long as the account is in existence. Information about the user and the use of the services is kept for as long as necessary for legitimate business interest, for legal reasons, and to prevent harm.

Fitbit transfers information to their corporate affiliates, service providers, and other partners who process it for them, based on their instructions, and in compliance with this policy and any other appropriate confidentiality and security measures. Fitbit may share non-personal information that is aggregated or de-identified so that it cannot reasonably be used to identify an individual.

After the study is complete

A report of this study may be submitted for publication, but your individual data will not be identifiable. Upon completion of the study, the study data will be permanently removed from study databases and transferred to password-protected secure servers at the University of Sydney and stored for 15 years, as per NHMRC Clinical Trial policy. All data will be de-identified, i.e. no personal details are stored.

Who has reviewed the research project?

All research in Australia involving humans is reviewed by an independent group of people called a Human Research Ethics Committee (HREC). The ethical aspects of this research project have been approved by the Sydney Local Health District (SLHD) HREC. This project will be carried out according to the *National Statement on Ethical Conduct in Human Research (2007, updated 2018)*. This statement has been developed to protect the interests of people who agree to participate in human research studies.

Complaints and compensation

If you suffer any injuries or complications as result of this study please contact the research team as soon as possible who will then assist you in arranging appropriate next steps.

If you are eligible for Medicare, you can receive any medical treatment required to treat the injury or complication, free of charge, as a public patient in any Australian public hospital.

Further information and who to contact

Every reasonable precaution will be taken to ensure your safety during the course of the study. If you want any further information concerning this project or if, at any point, you have any issues or medical problems which may be related to your involvement in the project (for example, any side effects), you can contact:

Name	Matthew Rahimi
Position	Project Coordinator
Telephone	02 9805 3146
Email	Matthew.Rahimi@mq.edu.au

Name	Sarah Cleophas
Position	Research Assistant
Telephone	02 9805 3288
Email	Sarah.cleophas@woolcock.org.au

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about being a research participant in general, then you may contact the reviewing HREC approving this research and HREC Executive:

Reviewing HREC name	Sydney Local Health District (RPAH Zone)
HREC Executive Officer	Merela Ghazal
Telephone	02 9515 7176
Email	SLHD-RPAEthics@health.nsw.gov.au
Protocol No.	X21-0265

For matters relating to the conduct of research at the site at which you are participating, the details of the local HREC Office contact/site complaints person are:

Name	Gregory Kaplan
Position	Research Governance Officer
Telephone	(02) 9114 01412
Email	Gregory.Kaplain@mq.edu.au

This information is for you to keep.

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insomnia (ASTEROID STUDY)***

PART B: RANDOMISED CONTROLLED TRIAL

ONLINE CONSENT FORM

I have read and understood the **Participant Information Sheet Version 1.3 (July 2023)** for the above-named study and agree to the following terms:

- I am older than 60 years.
- I confirm that I have read and understand the Participant Information Sheet for the *App-delivered Sleep Therapy for Older Individuals with insomnia – a Randomised Controlled Trial* study.
- I understand that if I have any questions or require further information, I can contact the research team. If I have had questions, I confirm that these have been answered to my satisfaction.
- I freely agree to participate in this research project according to the conditions in the Information sheet which I confirm has been digitally provided to me.
- I understand that my involvement in this study may not be of any direct benefit to me.
- I understand that being in this study is completely voluntary and I can withdraw from the study at any stage without penalty by advising the research team. If I decide to withdraw from the study, I agree that the information collected about me up to the point when I withdraw will be stored and analysed.
- I understand how my data will be stored, who will have access to it and what will happen to the data after the end of the study. I understand that my de-identified data may be used for future research, and I agree to this.
- I understand the Coordinating Principal Investigator, Associate Professor Christopher Gordon, will manage the e-consent database and have access to the Consent Forms, which will be stored at the Woolcock Institute of Medical Research.
- I understand I can download a copy of this signed consent form for me to keep.

[Digital consent is obtained by collecting the following information in forced text entry fields:]

I hereby agree to participate in all aspects of this research study YES ☐ NO ☐

NAME:

EMAIL ADDRESS:

PHONE NUMBER:.....

I prefer to be contacted by:

Email ☐

Text ☐

Both ☐

I would like to receive a copy of the study results by Email when they become available:

YES ☐

NO ☐