ISRCTN12324806 https://doi.org/10.1186/ISRCTN12324806

Does restrictive screen use before bedtime improve sleep among young adults in the long run?

Submission date
04/02/2026

Recruitment status
Recruiting

Registration date
06/02/2026

Overall study status
Ongoing

Last Edited
08/04/2026

Condition category
Nervous System Diseases

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
Sleep problems are common among young people. Today, health care recommends avoiding screens before bedtime for sleep problems. This study will investigate whether and how sleep is affected when participants do not use screens during the night, starting 30 minutes before bedtime. Screens, meaning mobile phones, computers, tablets, TVs and similar technology.
The study aims to investigate whether and how restrictive screenuse before bedtime and during the night affects sleep in the short and long term. In addition, the aim is to investigate whether the advice not to use screens can be followed and whether there is a correlation between screen use and sleep problems.

Who can participate?
Students and former students from Swedish universities and colleges aged 20-29 years who use an iPhone or Android mobile phone and experience sleeping problems.

What does the study involve?
Participants are randomly divided into two groups: One group refrains from screen use at night starting 30 minutes before bedtime. The other group is asked to live as usual for 10 consecutive days. The sleep of the two groups is then compared. To be in the study, participants need to use either an Android or an iPhone mobile phone.

Some participants (15-20) who have experienced restriction from screens will be interviewed about their experiences. All participants will be asked to fill in a short questionnaire after the first 10 days of the study. After 3, 6 and 12 months, follow-ups take place with written questions about screen use, sleep habits and other experiences and perceptions about sleep.

What are the possible benefits and risks of participating?
Benefits: The study may contribute to a more stable scientific basis for advice on sleep problems and simultaneous screen use, which in the long term could contribute to improved public health. Participants will have the opportunity to reflect on their screen use. When the study is completed, participants can, if they wish, take part in the screen time and movement recording.

Risks: There are no major risks associated with participating. Filling out basic forms, a sleep diary, handling an actigraph, taking screen shots, and participating in a possible interview will take some time. If the screen usage is high, there might be withdrawal reactions after screen restriction.

Where is the study run from?
University of Gothenburg, The Sahlgrenska Academy, Sweden.

When is the study starting and how long is it expected to run for?
December 2025 to June 2028

Who is funding the study?
1. Kamprad Family Foundation, Sweden.
2. Region Västra Götaland, Sweden.

Who is the main contact?
Dr Ingmarie Skoglund, ingmarie.skoglund@vgregion.se, ingmarie.skoglund@telia.com

Contact information

Type(s)
Principal investigator, Scientific, Public

Contact name
Dr Ingmarie Skoglund

Contact details
University of Gothenburg, The Sahlgrenska Academy, Institute of Medicine, School of Public Health and Community Medicine, Community Medicine
Gothenburg
Sweden
405 30
+46708594137
ingmarie.skoglund@telia.com

Type(s)
Public, Scientific, Principal investigator

Contact name
Dr Ingmarie Skoglund

Contact details
University of Gothenburg, The Sahlgrenska Academy, Institute of Medicine, School of Public Health and Community Medicine, Community Medicine
Gothenburg
Sweden
405 30
+46708594137
ingmarie.skoglund@gu.se

Additional identifiers

Study information

Scientific Title
Does restrictive screen use before bedtime improve sleep in the long run? A randomised controlled trial among young adults with sleeping problems.

Acronym
SoS

Study objectives
To investigate if sleep in young adults with sleeping problems improve their sleep in the short and the long run after restricted screen use 30 minutes before bedtime and during the night, compared with no restriction, and to investigate how restriction is perceived.

Ethics approval required
Ethics approval required

Ethics approval(s)
1. Approved 16/09/2021, Stockholm avdelning övrig (Etikprövningsmyndigheten Box 2110, Uppsala, 750 02, Sweden; +46 -10-475 08 00; registrator@etikprovning.se), ref: 2021-04222

2. Approved 03/02/2026, Stockholm avdelning övrig (Etikprövningsmyndigheten Box 2110, Uppsala, 750 02, Sweden; +46 -10-475 08 00; registrator@etikprovning.se), ref: 2023-00625-02

3. Approved 24/11/2025, Stockholm avdelning övrig (Etikprövningsmyndigheten Box 2110, Uppsala, 750 02, Sweden; 0046 -10-475 08 00; registrator@etikprovning.se), ref: 2025-07227-02

4. Approved 10/02/2026, Stockholm avdelning övrig (Etikprövningsmyndigheten Box 2110, Uppsala, 750 02, Sweden; +46 -10-475 08 00; registrator@etikprovning.se), ref: 2025-08565-02

Primary study design
Interventional

Allocation
Randomized controlled trial

Masking
Open (masking not used)

Control
Uncontrolled

Assignment
Single

Purpose
Prevention, To find out if screen restriction 30 minutes before bedtime and during 10 nights is feasible and to describe the quality of sleep in the long run.

Study type(s)

Health condition(s) or problem(s) studied
ICD-10 Version: 2019: G47.9 Sleep disorder.

Interventions
Brief name
Restricted/no use of mobile phone/screen use 30 minutes before bedtime.

Why
Theory: The best way to test the hypothesis is a randomized controlled trial (RCT). The RCT handles biases and confounders. Due to the nature of the intervention, blinding is impossible. In primary care, pragmatic approaches must often be used to answer complex questions. As for theories using the results, these theories may be useful: the Self-Determination Theory (SDT), in which the context and quality in motivation are important for behavioural changes; the Health Belief Model (HBM), a sociopsychological health behaviour change model; and the transtheoretical model of health behaviour change, which posits six stages of change: precontemplation, contemplation, preparation, action, maintenance, and termination.

Given that the feasibility of sustained screen restriction among young adults remains largely unexplored, the RCT will be complemented by several qualitative components, oral and written. This mixed-methods design enables a nuanced understanding of the results in the study.

The main rationales are to find out whether the advice of screen restriction works, what effect restriction might have on sleep quality, how it is experienced by the participants, and how sleep is perceived during a year. Follow-ups at 3, 6 and 12 months.

What
Two hundred and twenty university students aged 20–29 years from universities in Region Västra Götaland (VG), who are self-reporting sleeping problems and use a mobile phone, are recruited from 1102 students who have already answered a questionnaire about sleep and screen use. If needed, additional participants will be recruited through collaboration with the student unions and health organizations. Region VG is a mini-Sweden regarding the composition of the population.

Restriction implies not using mobile phones or any screens for 30 minutes before bedtime and during the night. Participants in the restriction group will be told to put their mobile phone outside the bedroom and not to have any other screens in the bedroom. They are to set the mobile phone to silent mode to avoid disturbances during the night.
The other measures are common for the two groups: The introduction includes how to fill in the background form, how to use the actigraph, how to take and send screenshots from the mobile phone, including from the week before study start as a proxy measure of screen use at night, and how to fill in the daily sleep diary via an application or eS Maker link. Actigraphy is an established medical-grade biometric monitoring technology and will be used to measure movement across the intervention/control period, from which sleep–wake activity will be derived. It will be kept on the wrist around the clock. If exceptions are necessary, this must be communicated. After the 10 days, actigraphs will be returned and screenshots delivered to the research group. Both groups receive information folders about their respective ways of handling mobile phones and telephone numbers to the researchers if contact is necessary.

Procedures
As above. Follow-ups are similar for both groups at 3, 6 and 12 months. A questionnaire is sent digitally to all participants. Fifteen to twenty participants in the intervention group will be interviewed digitally for approximately 45 minutes to explore experiences and thoughts after the restriction.

Who provided
One or two of the three researchers in charge of the inclusion process provide the information according to our template/form regarding the intervention and control. Their backgrounds are general practitioner, district nurse, and behavioural science counsellor/PhD student. All are scientifically trained, experienced, and continuously rehearse the process.

How
The information is given face-to-face with one participant at a time. The information session takes about 45–60 minutes. A template for the introduction, including intervention/control, is followed.

Where
The meeting for introducing the participants to the study is held at a secluded place at the University of Gothenburg or in known premises belonging to the R&D department of Region Västra Götaland.

When and how much
The information is given to participants in both the intervention and control groups for approximately the same duration on one occasion, as described above.

There is no tailoring or modifications.

How well
We monitor whether recording in the actigraph, screenshots to record screen use, and the sleep diary function are used correctly and are used.

Randomisation Method
Randomization was performed in advance, prior to study initiation, using a webbased, stratified randomization method. The study included 220 participants, who were randomized in blocks of 10 participants per occasion, generating a total of 22 randomization blocks. Each participant was assigned a unique study ID between 000 and 999 and randomized to the intervention or control group using a seed-based (seed = 42) block randomization algorithm. This method ensured balanced group allocation, with exactly 110 participants in each group at study initiation. The study was doubleblind, and the randomization list was maintained by the responsible researcher without access for members of the research group who would conduct analysis of the actigraphy-collected data.

Intervention Type
Behavioural

Primary outcome(s)
1. Sleeping time measured using movement measurements with actigraphy in combination with measuring screen time and sleep diaries at baseline, and after 3,6 and 12 months

Key secondary outcome(s)

1. Experiences from restriction from screens measured using interviews and questionnaires at 10 days and 3,6 and 12 months

Completion date
28/06/2028

Eligibility

Key inclusion criteria
1. Students and former students from Swedish universities and colleges
2. Ages 20-29 years
3. The participants use iPhone or Android mobile phones
4. The participants experience sleeping problems

Healthy volunteers allowed
Yes

Age group
Adult

Lower age limit
20 Years

Upper age limit
29 Years

Sex
All

Total final enrolment
0

Key exclusion criteria
Not meeting the key inclusion criteria.

Date of first enrolment
04/12/2025

Date of final enrolment
28/06/2027

Locations

Countries of recruitment
Sweden

Sponsor information

Organisation
Kamprad Family Foundation

ROR
https://ror.org/03qb1q739

Organisation
Region Västra Götaland

ROR
https://ror.org/00a4x6777

Funder(s)

Funder type

Funder Name
Familjen Kamprads Stiftelse

Alternative Name(s)
Kamprad Family Foundation

Funding Body Type
Private sector organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
Sweden

Funder Name
Västra Götalandsregionen

Alternative Name(s)
Region Västra Götaland, Västra Götaland Regional Council, Västra Götaland region, Västra Götalandsregiona, VGR

Funding Body Type
Government organisation

Funding Body Subtype
Local government

Location
Sweden

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available