

Sleep Survey for Medical Trainees, SSMT

Background

This is a survey to understand sleep in the context of medical trainees (on call) and the participants knowledge about the relevance of sleep, shiftwork, and the impact that sleep may have on their working performance. The survey has been developed by sleep experts from America, Europe, and Africa, in collaboration with the World Sleep Society. This survey will be available during the following period (02/2025-03/2025). It should take you about 30-40 minutes to complete.

The survey will focus on three different aspects, complemented by two standard questionnaires:

- 1) Demographics and Place of Work
- 2) Basic Knowledge and Perception of Sleep
- 3) Sleep Routine
- 4) Epworth Sleepiness Scale, Insomnia Sleep Index

By completing the survey you provide consent to process the data according to General Data Protection Regulation (GDPR), and give permission for the named parties (see below) do analyse the data and publish in a peer-reviewed journal of sleep medicine / present data and results at educational events and conferences. Participation can be stopped at any time and you may want to fill in only some questions, while leaving others open. Ethical approval has been granted by King's College London ethics committee (registration number MRA-23/24-45277). Subsequently, the survey has been registered on ClinicalTrials.gov (NCT06706453).

Should you have any questions or complaints you can contact Dr Steier (Tel: +44(0)207 188 7188 x82823/x82821). It is anticipated that the results of the survey will inform local employers, medical schools and universities, as well as national policymakers and international collaborative networks. The results of the survey will be published in a peer-reviewed journal of sleep medicine.

Data Information

As Sponsor/co-Sponsor King's College London has a responsibility to keep information collected about you safe and secure, and to ensure the integrity of research data. Specialist teams within King's College London continually assess and ensure that data is held in the most appropriate and secure way. This may include storage of anonymised or pseudonymised data with a contracted GDPR compliant third party storage provider within the UK, where they are assessed as the best data storage option. In such cases the third party storage provider will not have access to any data that could directly identify you.

Please now complete the survey below.

Thank you!

-
- 1) Do you consent to participation in this survey, providing data (in compliance with GDPR) that will be analysed, as per above guidance? Yes No

SECTION 1**Demographics**

2) What is your age?

((years))

3) What is your gender?

- male
 female
 non-binary
 transgender
 other

4) If you answered 'other' to the previous question, please insert here how you identify, or else move to the next question.

((text))

5) What is your height?

((metres))

6) What is your weight?

((kg))

7) Are you single?

- Yes
 No

8) Do you have children?

- Yes
 No

9) If you have children, what is the age of the youngest? If you don't have any children move to the next question.

((years))

10) Do you drink alcohol?

- Yes
 No
 Prefer not to say

11) If you answered 'yes' to the previous question, please state how many units of alcohol per week you would typically consume. If you don't drink any alcohol move to the next question.

((number of units per week))

12) What is your smoking history?

- Never smoker
 Current smoker
 Former smoker
 Prefer not to say
((years))

13) If you answered 'current smoker' or 'former smoker', how many years did you smoke in your life? If you have never smoked move to the next question.

((years))

14) If you answered 'current smoker' or 'former smoker', how many cigarettes per day would you typically have smoked? If you have never smoked move to the next question.

((cigarettes per day))

15) The following number provides you with the number of 'pack years', which is an estimation of the total exposure to tobacco smoke over your lifetime.

(<https://www.cancer.gov/publications/dictionaries/cancer-terms/def/pack-year>)

Place of Work

16) Where do you work (institution)?

((institution name))

17) Which country do you work in?

((country name or country code / abbreviation))

18) Is your current employer...

- the medical school
- the hospital
- other

19) Do you live and work in a predominantly urban or rural setting?

- urban
- rural
- suburban
- mixture of the above
- don't know

20) What is the approximate size of the city you live in?

- less than 10,000 citizen
- 10,000 - 100,000 citizen
- 100,000 - 500,000 citizen
- 500,000 - 1mio citizen
- 1 - 5mio citizen
- >5mio citizen

21) In your medical job, are you....

- student
- intern
- fellow
- resident
- consultant
- other

22) How long have you worked in the current role?

((years in numbers))

23) How long have you worked following completion of medical school in total?

((years))

24) How long is your commute (one way)?

((hours))

25) Have you ever fallen asleep while commuting for your current job?

- yes
- no
- don't know

26) What type of transport do you use to commute?

- driving a car (single)
- car pool (shared)
- bus
- walking
- cycling
- e-scooter / e-bike
- motorbike
- train
- boat / ferry
- plane
- other

27) Are you currently on call while filling in the survey?

- Yes
- No

The following seven questions should be answered for the period covering the last six months (Q17-Q23):

28) What specialty / department do you work in?

- General Medicine
- Respiratory Medicine
- Sleep Medicine
- Cardiology
- Gastroenterology
- Haematology / Oncology
- Rheumatology
- General Surgery
- Traumatology
- Cardiac Surgery
- Abdominal Surgery
- Gynaecology / Obstetrics
- Urology
- Psychiatry
- Psychology
- Geriatrics / Elderly
- Paediatrics
- Radiology
- Neurology
- Critical Care
- Orthopaedics
- Emergency Medicine (A&E)
- Anaesthesiology
- Ophthalmology
- Endocrinology
- Other
((nominal))

29) If you answered 'other' to the previous question, please specify what specialty / department you work in.

((text))

30) Different regions and healthcare systems have different definitions of being 'on call'. how would you define being 'on call'?

- out of sociable hours,
- overnight,
- weekends / holiday season,
- on site,
- remote,
- other

31) If you selected 'other' in the previous question you can write a short text here to explain.

32) What is your frequency working on call?

((nominal; e.g., one in four weeks, 1:4, ...))

33) How long is your regular on call?

((hours))

34) What is the minimum duration on call?

((hours))

35) What is the maximum duration on call?

((hours))

36) Are you allowed to sleep while on call?

- yes
 no
 don't know

37) Does your on call shifts over the last six months follow a certain rotation format?

- Yes
 No

38) If yes to the previous question, please explain:

((text))

39) Please describe your on call situation in short words:

((text))

40) Does your employer offer you to be flexible when planning your on call shifts (e.g., during leave, childcare needs) ?

- yes, no, sometimes,
 don't know

41) On average, how many hours per day do you work when not on-call?

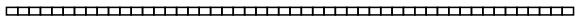
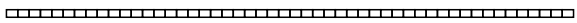
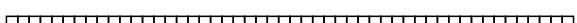
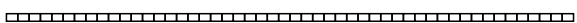
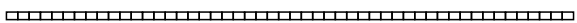
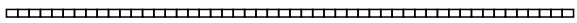
((hours))

SECTION 2**Basic Knowledge**

On a scale from 0-10, ...

- 42) ... how would you rate your knowledge about sleep in general?
- no knowledge neutral outstanding knowledge
- =====
- (Place a mark on the scale above)
-
- 43) ... how would you rate your knowledge about obstructive sleep apnoea?
- no knowledge neutral outstanding knowledge
- =====
- (Place a mark on the scale above)
-
- 44) ... how would you rate your knowledge about shift work, insomnia and other work related sleep disorders?
- no knowledge neutral outstanding knowledge
- =====
- (Place a mark on the scale above)
-
- 45) ... how would you say you cope with a heavy workload?
- not at all neutral very well
- =====
- (Place a mark on the scale above)
-
- 46) ... how often do you subjectively experience burnout symptoms ?
- not at all neutral very frequent
- =====
- (Place a mark on the scale above)
-
- 47) What burnout symptoms do you experience?
- (<https://www.nhs.uk/every-mind-matters/lifes-challenges/work-related-stress/>
<https://mentalhealth-uk.org/burnout/>)
-
- 48) Do you think you had any sleep problems prior to your work / being on call?
- yes no don't know
-
- 49) On a scale from 0-10, how would you rate your sleep prior to working in medicine?
- very poor neutral very good
- =====
- (Place a mark on the scale above)
-
- 50) On a scale from 0-10, how would you rate your sleep now?
- very poor neutral very good
- =====
- (Place a mark on the scale above)
-
- 51) Do you think you have a sleep disorder?
- yes no don't know
-
- 52) If you answered yes to the previous question, how would you describe your problem?

 ((text))

-
- 53) Do you feel excessively sleepy at the moment? yes no don't know
-
- 54) On a scale from 0-10, how often do you experience health issues when working during night shift?
not at all neutral very frequently

(Place a mark on the scale above)
-
- 55) Do you feel more stressed working during a night shift? yes no don't know
-
- 56) Do you experience sleeping problems when working during night shift? yes no don't know
-
- 57) Do you have problems controlling your weight because of the shift work? yes no don't know
-
- 58) Do you have poor social relationship because of your shift work? yes no don't know
-
- 59) Do night shifts cause conflict with your family? yes no don't know
-
- 60) Due to shift work, are you unable to maintain social relationships? yes no don't know
-
- 61) Does the quality of work in the night shift differ from the quality of work you deliver in the day shift? yes no don't know
-
- 62) Do you feel sleepier after working a night shift? yes no don't know
-
- 63) On a scale from 0-10, how much do you agree with the following statement? "Working during a night shift gives me the opportunity to improve my performance and advance my career."
not at all neutral very much so

(Place a mark on the scale above)
-
- 64) On a scale from 0 to 10, how often do you have problems with waking up too early and not being about to get back to sleep?
not at all neutral a lot

(Place a mark on the scale above)
-
- 65) On a scale from 0 to 10, how is your sense of well-being during the time you are awake?
very low neutral very good

(Place a mark on the scale above)
-
- 66) On a scale from 0 to 10, how often do you doze off at work?
never neutral always

(Place a mark on the scale above)
-
- 67) On a scale from 0 to 10, how often do you doze off while driving after at least two days off from work?
never neutral always

(Place a mark on the scale above)

SECTION 3
Sleep Routine

68) How long would you feel is the optimal sleep duration for you?

_____ ((hours))

The following eight questions refer to a period when you are on call (physical presence in hospital required):

69) How many hours do you usually sleep per day when on call?
_____ ((hours))

70) When do you go to bed when on call?
_____ ((time HH:MM))

71) When do you get up when you are on call?
_____ ((time HH:MM))

72) Do you have problems falling asleep when you are on call? yes no don't know

73) Do you have problems staying asleep when you are on call? yes no don't know

74) Do you require daytime naps when you are on call? yes no

75) If you require any naps while on call, how many do you need each day on average?
_____ ((Number))

76) If you require any naps while on call, how long would the typical nap last?
_____ ((mins))

The following eight questions refer to a period when you are not on call (physical presence in hospital not required):

77) How many hours do you usually sleep per day when not on call?
_____ ((hours))

78) When do you go to bed when not on call?
_____ ((time HH:MM))

79) When do you get up when you are not on call?
_____ ((time HH:MM))

80) Do you have problems falling asleep when you are not on call? yes no don't know

81) Do you have problems staying asleep when you are not on call? yes no don't know

82) Do you require daytime naps when you are not on call? yes no

83) If you require any naps while not on call, how many do you need each day on average?
_____ ((Number))

84) If you require any naps while not on call, how long would the typical nap last?
_____ ((mins))

85) Would you like to see a sleep doctor for any sleep related issues? yes no don't know

86) Are you on any sleep medication? yes no don't know
 prefer not to say

87) If you are on any sleep medication, please provide the name of the medication:
_____ ((text))

SECTION 4**Questionnaires****Epworth Sleepiness Scale**

If you suspect you might have obstructive sleep apnoea (OSA), answer the following questions and take your answers to your GP.

How likely are you to doze off or fall asleep in the following situations?

This refers to your usual way of life in recent times. Even if you haven't done some of these things recently, try to work out how they would have affected you.

It's important that you answer each question as best you can.

- | | | | |
|---|---|------------------------------|--------------------------------|
| 88) Sitting and reading | <input type="radio"/> never
<input type="radio"/> high | <input type="radio"/> slight | <input type="radio"/> moderate |
| 89) Watching TV | <input type="radio"/> never
<input type="radio"/> high | <input type="radio"/> slight | <input type="radio"/> moderate |
| 90) Sitting still in a public place (e.g. a theatre, a cinema or a meeting) | <input type="radio"/> never
<input type="radio"/> high | <input type="radio"/> slight | <input type="radio"/> moderate |
| 91) As a passenger in a car for an hour without a break | <input type="radio"/> never
<input type="radio"/> high | <input type="radio"/> slight | <input type="radio"/> moderate |
| 92) Lying down to rest in the afternoon when the circumstances allow | <input type="radio"/> never
<input type="radio"/> high | <input type="radio"/> slight | <input type="radio"/> moderate |
| 93) Sitting and talking to someone | <input type="radio"/> never
<input type="radio"/> high | <input type="radio"/> slight | <input type="radio"/> moderate |
| 94) Sitting quietly after lunch without having drunk alcohol | <input type="radio"/> never
<input type="radio"/> high | <input type="radio"/> slight | <input type="radio"/> moderate |
| 95) In a car or bus while stopped for a few minutes in traffic | <input type="radio"/> never
<input type="radio"/> high | <input type="radio"/> slight | <input type="radio"/> moderate |

96) Total Score Epworth Sleepiness Scale

This is your total score in the Epworth Sleepiness Scale. A score of 10 or greater raises concern: you may need to get more sleep, improve your sleep practices, or seek medical attention to determine why you are sleepy.

Insomnia Severity Index

For each question, please choose the description that best fits your answer.

Please rate the current (i.e. last 2 weeks) severity of your insomnia problem(s).

- 97) Difficulty falling asleep none mild moderate
 severe very severe
-
- 98) Difficulty staying asleep none mild moderate
 severe very severe
-
- 99) Problems waking up too early none mild moderate
 severe very severe
-
- 100) How SATISFIED/DISSATISFIED are you with your CURRENT sleep pattern? very satisfied satisfied
 moderately satisfied
 dissatisfied very dissatisfied
-
- 101) How NOTICEABLE to others do you think your sleep problem is in terms of impairing the quality of your life? not at all noticeable a little
 somewhat much
 very much noticeable
-
- 102) How WORRIED/DISTRESSED are you about your current sleep problem? not at all worried a little
 somewhat much
 very much worried
-
- 103) To what extent do you consider your sleep problem to INTERFERE with your daily functioning (e.g. daytime fatigue, mood, ability to function at work/daily chores, concentration, memory, mood, etc.) CURRENTLY? not at all interfering a little
 somewhat much
 very much interfering

104) Total Score for the Insomnia Severity Index _____

Total score categories:

0-7 = No clinically significant insomnia

8-14 = Subthreshold insomnia

15-21 = Clinical insomnia (moderate severity)

22-28 = Clinical insomnia (severe)

If you are concerned about your score you may want to discuss the results with your GP.

105) Do you have any other comments related to this survey or your on call? _____

((text))

Thank you very much for the time to complete this survey, you have now reached the end of the survey.

If you have any questions or concerns then please get in touch via the information provided above.