

UK Biobank

Sleep web-based questionnaire

Version 1.1

<http://www.ukbiobank.ac.uk/>

7th May 2024



This document details the rationale and procedure for administration of the sleep web-based questionnaire for UK Biobank.

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1. Introduction – scientific rationale

Good quality, restorative sleep is central to health. Laboratory manipulations of sleep show acute adverse behavioural and physiological consequences¹, and prospective studies demonstrate that sleep and circadian rhythm disruption increases risk for a range of diseases, including psychiatric disorders, cancer, and type 2 diabetes². Sleep disorders affect approximately 25% of the population and can substantially impair quality of life. Disordered sleep may reflect altered sleep duration, quality, or timing, as well as abnormal behaviours that emerge during sleep, in association with daytime dysfunction (including excessive somnolence). A further ~20% of the population experience insufficient sleep, often engendered by curtailment of sleep time due to work schedule or prioritisation of social and leisure activities. Both categories of sleep disruption represent significant challenges to health and well-being, and have been estimated to cost the UK economy >£40 billion per year³. Understanding the aetiology and consequences of sleep disruption has the potential to transform sleep therapeutics and inform public health guidance and intervention.

Potential benefits of enhanced sleep measurement in the UK Biobank

Current measurement of sleep and sleep disorders in UK Biobank is limited to single-item measures of insomnia, sleep duration, snoring, daytime sleepiness, and chronotype, or diagnostic codes extracted from primary care records. Sleep disorders are often under-recognised in clinical practice, and therefore codes from primary care records fail to capture the true magnitude and burden of disordered sleep⁴. Wrist-worn accelerometry has been collected in a sub-sample of UKB participants, which is a major strength, enabling assessment of circadian rest-activity rhythms as well as estimates of sleep timing, duration, and continuity⁵.⁶ Over the last decade, a significant number of studies have been published using sleep and circadian-related data generated from UKB, including seminal GWAS of insomnia symptoms⁷,⁸, sleep duration⁹ and chronotype¹⁰.

While the sleep field recognises the uniqueness of the UK Biobank resource, it is clear that more fine-grained measurement of sleep and its disorders will help harness the full range of available biomedical data to drive novel discoveries¹¹. For example, enhanced phenotyping will more precisely characterise heterogeneity within disorder categories and reduce misclassification between related sleep disorders (e.g. insomnia and restless legs syndrome). Because sleep disorders often go undiagnosed in primary care, we need good measures that capture probable cases to permit comparison with controls on genetics, biomarkers, structural and functional brain health, and other disease indices. Doing so will provide an unrivalled opportunity to define the underpinning biology and putative consequences of a range of sleep

disorders, while accounting for the influence of other sleep (and non-sleep) confounding variables. There are no existing large-scale studies that do this in a comprehensive manner. Beyond disordered sleep, we also want to describe variation in normal sleep patterns and association with environmental and lifestyle factors, as well as change over time. For example, better characterisation of changes in sleep over time will help researchers interrogate associations between sleep and cognitive decline, enriched by concurrent cognitive testing and neuroimaging data. Middle-to-late adulthood is also a period characterised by a marked increase in the prevalence of several sleep disorders (e.g., insomnia, OSA, REM sleep behaviour disorder). More precise sleep phenotyping through questionnaire methods, in combination with actigraphic data, has the potential to identify novel biomarkers of sleep disorders and permit examination of predictive relationships with subsequent disease and mortality.

2. List of contributors

The following academics and clinicians provided input and advice on the content and structure of the sleep questionnaire:

Questionnaire development lead:

- Simon Kyle, Professor of Experimental and Clinical Sleep Research, Nuffield Department of Clinical Neurosciences, University of Oxford

Other main expert contributors:

- Colin Espie, Professor of Sleep Medicine, Nuffield Department of Clinical Neurosciences, University of Oxford
- Emmanuel Mignot, Professor of Psychiatry and Behavioral Sciences, Department of Psychiatry and Behavioral Sciences, Stanford University
- Derk-Jan Dijk, Professor of Sleep and Physiology, Surrey Sleep Research Centre, University of Surrey

3. Content

The UK Biobank sleep questionnaire has been designed to capture key domains of self-reported sleep health and sleep disorders using validated questionnaires and bespoke items where appropriate. Potential causes of sleep disruption are probed using attributional questions from the World Sleep Survey and Pittsburgh Sleep Quality Index, and through assessment of other key lifestyle (e.g. shift-work, exercise, alcohol, caffeine) and environmental (e.g. light, noise) variables. The use of wearable devices (to monitor sleep) and

family history of sleep disorders are also probed. Chronotype is assessed with the reduced version of the Morning-Eveningness Questionnaire, supplemented by questions on sleep timing during work vs non-work days (where relevant).

There is no existing questionnaire with adequate psychometric properties that permits identification of all the main sleep disorder types. We therefore selected published scales commonly used in clinical research to assess common sleep disorders, supplemented by amended and additional questionnaire items. These include the Sleep Condition Indicator (insomnia), Berlin questionnaire (obstructive sleep apnoea), Cambridge-Hopkins questionnaire (restless legs syndrome), Brief Screen for Sleep Disorders (questions assessing delayed and advanced sleep-wake phase disorder) and Shift Work Disorder Screening Questionnaire (shift work sleep disorder), Alliance Sleep Questionnaire (narcolepsy, parasomnias) and single-item screen for REM sleep behaviour disorder (RBD1Q).

Sleep before the pandemic was assessed using bespoke questionnaire items to enable comparison with present day. We also assessed potential correlates of sleep and sleep disorders, including sleepiness (bespoke questionnaire items), fatigue (Flinders Fatigue Scale), depression and anxiety (PHQ-4), cognitive impairment (BC-CCI), and accidents (Alliance questionnaire). We have selected brief measures where possible and have incorporated questionnaire branching where appropriate to tailor relevance. Our sleep questionnaire measures are compatible with other large-scale population-based studies (e.g., The Rotterdam Study¹², The HUNT-study¹³) and sleep-lab based studies (e.g., STAGES; The Stanford Technology Analytics and Genomics in Sleep study¹⁴), potentially facilitating comparisons and data pooling.

Some of the items in the sleep questionnaire have been asked of UK Biobank participants in previous questionnaires, and these are identified in Appendix 1. A detailed guide to the sources of all questions used in the questionnaire is included below.

Domain	Source/tool	Notes about source/tool	Reference
rMEQ	Reduced MEQ	Assesses chronotype i.e. the extent to which one is morning or evening type.	Adan, A. & Almirall, H. (1991) ¹⁵
Work and sleep	Shift work – bespoke	Screening question	N/A
	Shift work sleep disorder questionnaire adapted with permission of author	Screens for high risk of Shift Work Disorder (SWD) in a shift-working population.	Barger, L. K. <i>et al.</i> (2012) ¹⁶

	Typical sleep times on work and non-work days - bespoke	Ascertains typical waking and sleeping times on working and non-working days.	N/A
Quality of sleep	Pittsburgh Sleep Quality Index (PSQI), adapted with permission of author	Assesses sleep quality over a 1-month time interval.	Buysse, D. J. <i>et al.</i> (1989) ¹⁷
	Amended World Sleep Survey environmental influences on sleep questions	Assesses attributed causes of sleep disruption.	Espie <i>et al.</i> unpublished.
	Change to sleep patterns and sleep quality since the Covid-19 pandemic – bespoke	Assesses the impact that the pandemic has had on sleep patterns.	N/A
Sleep Condition Indicator	Sleep Condition Indicator, amended with permission of the author	Measures sleep problems against the DSM-5 criteria for insomnia disorder.	Espie, C. A. <i>et al.</i> (2014) ¹⁸
	Wake up earlier than intended – bespoke	None	N/A
Sleep disorders	BAP (circadian rhythm disorders)	Screens for probable delayed and advanced sleep-wake phase disorder.	Wilson, S. <i>et al.</i> (2010) ¹⁹
	Questions based on Alliance Sleep Questionnaire - narcolepsy and parasomnia items	The Alliance Sleep Questionnaire (ASQ) is a comprehensive, online sleep questionnaire that assesses sleep symptoms. It is administered to ~8,000 patients annually in the Stanford Sleep Medicine Centre. Note that all items are not included in this questionnaire so comparability cannot be assumed.	Leary, E.B. <i>et al.</i> (2014) ²⁰
	REM Sleep Behaviour Disorder Single-Question Screen	A screening question for dream enactment with a simple yes/no response.	Postuma, R.B. <i>et al.</i> (2012) ²¹
	Berlin Questionnaire: Sleep Apnoea	Validated questionnaire used to identify the risk (low to high) of sleep disordered breathing (obstructive sleep apnoea). Has been used in primary care and non-primary care settings.	Netzer, N. <i>et al.</i> (1999) ²²
	Alliance Sleep Questionnaire accident or near miss question	As above	As above
Fatigue	Flinders Fatigue Scale	Measures daytime fatigue (differentiated from sleepiness)	Gradisar, M. <i>et al.</i> (2007) ²³
Restless legs syndrome (RLS)	Questions based on CH-RLSq (Cambridge-Hopkins Restless Legs Syndrome Questionnaire),	CH-RLSq is a well-validated questionnaire for identification of subjects likely to be diagnosed with RLS. Note that all items are not included in this questionnaire so comparability cannot be assumed.	Burchell, B. <i>et al.</i> (2008) ²⁴

	amended with permission of the authors		
Sleep consequences	Bespoke questions	Assesses self-perceived sleepiness, sleepiness in passive situation and sleepiness in active situation. This new scale will be validated against the Epworth Sleepiness Scale which is administered to ~8,000 patients annually in the Stanford Sleep Medicine Centre.	N/A
	British Columbia Cognitive Complaints Inventory	Assesses perceived cognitive difficulties	Iverson, G.L. & Lam R.W. (2013) ²⁵
Family history	Alliance Sleep Questionnaire Family History	As above	As above
Lifestyle and behaviours	Key lifestyle and variables (sleep tracker, travel, alcohol, exercise, use of electronic devices, time outside, caffeine) – bespoke	None	N/A
	Alliance Sleep Questionnaire	As above	As above
	Questions about hours spent outdoors, previously used in UK Biobank questionnaire – bespoke	None	None
PHQ-4	Patient Health Questionnaire-4	An established research and clinical tool. All or part of the scale has previously been completed by UK Biobank participants at several time points.	Kroenke, K. <i>et al.</i> (2009) ²⁶

The full list of questions can be found in Appendix 1.

4. Piloting

Prior to inviting all participants with a contact email address (approximately 330,000) to complete it, UK Biobank piloted this questionnaire with 10,000 participants to ensure that the online platform and procedures were adequately robust and that the questionnaire was acceptable in terms of content and length. Several questions and portions of text in the ‘work and sleep, and ‘sleep consequences’ modules were found to need revision during the pilot. Data captured using the different question wording is presented in different data fields. Examples of this are WaS1 and WaS1_ALT.

5. Administration

5.1: The questionnaire administration process for UK Biobank participants with an email address was as follows:

- an initial invitation email (which included a hyperlink to their personalised questionnaire);
- a reminder email to non-responders sent two weeks after the initial invitation;
- a reminder email sent to partial responders (i.e. those who had only completed part of the questionnaire) two weeks after they started the questionnaire;
- a 'last-chance' invitation sent to non-responders four months after the initial invitation.

5.2: Participants for whom UK Biobank did not have an email address were encouraged via the information on the UK Biobank website to complete the online questionnaire by logging on directly to the participant website.

5.3: The median time for participants to fully complete the questionnaire was 22.6 minutes. Excluding the top 5 per cent of completion times (which were outliers resulting from there being no timeout on the questionnaire modules), 77 per cent of participants completed the questionnaire in 30 minutes or less.

5.4: Data were removed from participants who failed the identity check at the beginning of the online questionnaire: that is, the dates of birth they provided did not match UK Biobank records. These amounted to 0.22% of all respondents.

5.5: Researchers are advised to review the distributions of fields that contain data from self-reported measures before using them for analyses. Extreme values may exist in the data, and no attempt to verify the accuracy of responses has been made.

5.6: Email invitations are also routinely sent to those participants who have recently updated their email address (and who have not yet completed the questionnaire). We therefore anticipate that data will continue to accrue for a small number of participants.

6. References

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Appendix 1: Questions and format of the questionnaire

Sleep questionnaire (v3.6, 29th February 2024)					
Introduction					
<p>Good quality, restorative sleep is central to health. Understanding the biological and environmental factors that lead to poor sleep as well as the consequences of sleep disruption has the potential to help millions of people have a better night's sleep.</p> <p>UK Biobank provides a unique opportunity to gather comprehensive information about sleep. We hope to combine the results of this questionnaire with other information you have provided, to gain a deeper understanding of the genetic determinants of sleep and its relationship with health and disease.</p>					
Q.ID	Field I.D	Stem	Question identical to previous questionnaire	Question similar to previous questionnaire	Responses
Identity check					
ID_INTRO 1		<p>This questionnaire is participant specific. It should only be completed by the person named on the email invitation OR the person who logged in to the participant website.</p> <p>We just want to check your date of birth. This is so that we can double-check that this questionnaire has been completed by the correct person (and not, for example, by someone who shares an email address with you).</p>			
ID_INTRO 2		Please enter your details below:			
ID_DAY		Day of birth:			<i>[DropDownList1: 31 choices 1 – 31.]</i>
ID_MONTH		Month of birth:			<i>[DropDownList2: 12 choices for months: "January" to "December".]</i>
ID_YEAR		Year of birth:			<i>[Text box allowing integer values and it allows selection of an integer between 1934 and 1971.]</i>
Sleep behaviour					
MEQINTRO		We would like to ask you some questions about your sleep patterns.			
MEQ1	30425	Approximately what time would you get up if you were entirely free to plan your day?			<i>[Select one from]</i> - 01=5:00–6:30am - 02=6:30–7:45am

					<ul style="list-style-type: none"> - 03=7:45–9:45am - 04=9:45–11:00am - 05=11:00–12 noon - 06=Other time of the day - DA=Prefer not to answer
MEQ2	30426	During the first half hour after you wake up in the morning, how do you usually feel?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=Very tired - 02=Fairly tired - 03=Fairly refreshed - 04=Very refreshed - DA=Prefer not to answer
MEQ3	30427	At approximately what time in the evening do you usually feel tired, and, as a result, in need of sleep?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=8:00–9:00pm - 02=9:00–10:15pm - 03=10:15 pm–12:45am - 04=12:45–2:00am - 05=2:00–3:00am - 06=Other time of the day - DA=Prefer not to answer
MEQ4	30428	At approximately what time of day do you usually feel your best?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=5:00–8:00am - 02=8:00–10:00am - 03=10:00 am–5:00pm - 04=5:00–10:00pm - 05=10:00 PM–5:00am - DA=Prefer not to answer
MEQ5	30429	One hears about “morning-types” and “evening-types.” Which one of these types do you consider yourself to be?		Field ID: 1180 (Touchscreen sleep questions)	<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=Definitely a morning-type - 02=Rather more a morning-type than an evening-type - 03=Rather more an evening-type than a morning-type - 04=Definitely an evening-type - DK=Do not know - DA=Prefer not to answer
Work and sleep					
WASINTRO		This module is about your work patterns.			
WASINTRO_ALT		This module is about your work patterns. Please complete this module even if you are not currently working, for example if you are retired.			

WaS1	30430	In the past month, did you typically work a non-standard shift schedule? <i>Here we define non-standard shift schedule as working hours outside the hours of 8am to 8pm.</i>			<i>[Select one from]</i> - 01=No – I didn't work - 02=No – I worked standard hours (e.g. 9:00am-5:00pm) - 03=Yes – I worked evening shifts (work typically finished between 8:00pm and midnight) - 04=Yes - I worked morning shifts (work typically started between 4:00am and 7:00am) - 05=Yes – I worked night shifts (work typically took place between 8:00pm and 8:00am) - 06=Yes – I worked rotating shifts or had irregular work hours DA=Prefer not to answer
WaS1_ALT	30431	In the past month, did you typically work a non-standard shift schedule? <i>Here we define non-standard shift schedule as working hours outside the hours of 8am to 8pm. If you are retired, please answer "No, I didn't work".</i>			<i>[Select one from]</i> - 01=No – I didn't work - 02=No – I worked standard hours (e.g. 9:00am-5:00pm) - 03=Yes – I worked evening shifts (work typically finished between 8:00pm and midnight) - 04=Yes - I worked morning shifts (work typically started between 4:00am and 7:00am) - 05=Yes – I worked night shifts (work typically took place between 8:00pm and 8:00am) - 06=Yes – I worked rotating shifts or had irregular work hours DA=Prefer not to answer
WaS2	30432	In the past month, while working non-standard shifts , did you have a problem <i>with waking up too early and not being able to get back to sleep?</i>			<i>[Select one from]</i> - 01=No - 02=Yes, a minor problem - 03=Yes, a considerable problem - 04=Yes, a serious problem - DA=Prefer not to answer
WaS3	30433	In the past month, while working non-standard shifts , was your sense of well-being:			<i>[Select one from]</i> - 01=very good? - 02=fairly good? - 03=fairly bad? - 04=very bad? - DA=Prefer not to answer
WaS4	30434	In the past month, during your non-standard shift , how likely were you to doze off at work?			<i>[Select one from]</i> - 01=Not likely at all - 02=Slightly likely - 03=Moderately likely - 04=Highly likely - DA=Prefer not to answer
WaS5	30435	In the past month, how likely were you to doze off or fall asleep while			<i>[Select one from]</i> - 01=Not likely at all - 02=Slightly likely

		driving after at least two days off from work?			- 03=Moderately likely - 04=Highly likely - DA=Prefer not to answer
WaS6	30436	On workdays in the past month, what time did you typically fall asleep? (This may be different to the time you went to bed)			- Menu1 Hours from 9:00pm to 8:00pm in hour increments - Menu2 Minutes from 00 to 55 in 5 minute increments OR - V=Varies significantly - DA=Prefer not to answer
WaS7	30437	On workdays in the past month, what time did you typically wake-up? (By 'wake up' we mean your final awakening time before getting up for the day)			- Menu3 Hours from 5:00am to 4:00am in hour increments - Menu4 Minutes from 00 to 55 in 5 minute increments OR - V=Varies significantly - DA=Prefer not to answer
WaS8	30438	On non-working days in the past month, what time did you typically fall asleep? (This may be different to the time you went to bed)"			- Menu5 Hours from 9:00pm to 8:00pm in hour increments - Menu6 Minutes from 00 to 55 in 5 minute increments OR - V=Varies significantly - DA=Prefer not to answer
WaS8_ALT	30439	On non-working days in the past month, what time did you typically fall asleep? (This may be different from the time you went to bed). By non-working days, we mean any days that you did not work, including if you are retired.			- Menu5 Hours from 9:00pm to 8:00pm in hour increments - Menu6 Minutes from 00 to 55 in 5 minute increments OR - V=Varies significantly - DA=Prefer not to answer
WaS9	30440	On non-working days in the past month, what time did you typically wake up? (By 'wake up' we mean your final awakening time before getting up for the day)			- Menu7 Hours from 5:00am to 4:00am in hour increments - Menu8 Minutes from 00 to 55 in 5 minute increments OR - V=Varies significantly - DA=Prefer not to answer
WaS9_ALT	30441	On non-working days in the past month, what time did you typically wake up? (By 'wake up' we mean your final awakening time before getting up for the day) By non-working days, we mean any days that you did not work, including if you are retired.			- Menu7 Hours from 5:00am to 4:00am in hour increments - Menu8 Minutes from 00 to 55 in 5 minute increments OR - V=Varies significantly - DA=Prefer not to answer- 00 No - DA Prefer not to answer

Quality of sleep					
QualityINTR O		You may notice some overlap between questions in this section and other sections – this is so that we can ensure that we collect accurate information from you. We would be grateful if you could complete all questions even if you think you have answered them already.			
Quality1INT RO		<p>The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply for the majority of days and nights in the past month.</p> <p>By “night” we mean the time period you expect to be sleeping, and by “morning” we mean the time you expect to wake/get up.</p> <p><i>[Copyright notices are required for questions Quality1-Quality5i, Quality5p, Quality 7, Quality 8 and Quality9-Quality11.</i></p> <p><i>Notice is: “Copyright 1989 and 2010. University of Pittsburgh. All rights reserved.”</i></p>			
Quality1	30442	During the past month, what time have you usually gone to bed at night?			<p><i>[Menu1 only allowing one selection, of an hour between 9pm and 8pm. - Menu2 only allowing one selection, of minutes from 00 to 55 in 5-minute increments. Prefixed “Bed time”. If Quality1=Prefer not to answer (DA), no other selection can be made.]</i></p> <p>- Menu1 [Hours from 9pm to 8pm. Display “12 midnight” instead of “12am” and “12 noon” instead of “12pm”.]</p> <p>- Menu2 [Minutes from 00 to 55 in 5-minute increments]</p> <p>OR</p> <p>- DA = Prefer not to answer</p>
Quality2	30443	During the past month, how long has it usually taken you to fall asleep each night?			<p><i>[Menu3 only allowing one selection, of an integer between 0 and 8. Menu3 is suffixed “hour(s)”.</i></p> <p><i>Menu4 only allowing one selection, of minutes from 00 to 55 in 5-minute increments. Menu4 is suffixed “minutes”. If Quality2=Prefer not to answer (DA), no other selection can be made.]</i></p>

					<ul style="list-style-type: none"> - Menu3 [Hours from 0 to 8] - Menu4 [Minutes from 00 to 55 in 5-minute increments] OR <ul style="list-style-type: none"> - DA = Prefer not to answer
Quality3	30444	<p>During the past month, what time have you usually got up in the morning?</p>			<p><i>[Menu5 only allowing one selection, of an hour between 5am and 4am. Menu6 only allowing one selection, of minutes from 00 to 55 in 5-minute increments. Prefixed "Getting up time". If Quality3=Prefer not to answer (DA), no other selection can be made.]</i></p> <ul style="list-style-type: none"> - Menu5 [Hours from 5am to 4am. Display "12 midnight" instead of "12am" and "12 noon" instead of "12pm".] - Menu6 [Minutes from 00 to 55 in 5-minute increments] OR <ul style="list-style-type: none"> - DA = Prefer not to answer
Quality4	30445	<p>During the past month, how many hours of actual sleep did you get each night?</p> <p>(This may be different to the number of hours you spent in bed.)</p>			<p><i>[Menu7 only allowing one selection, of an integer between 0 and 20. Menu7 is suffixed "hour(s)". Menu8 only allowing one selection, of minutes from 00 to 55 in 5-minute increments. Menu8 is suffixed "minutes". If Quality4=Prefer not to answer (DA), no other selection can be made.]</i></p> <ul style="list-style-type: none"> - Menu7 [Hours from 0 to 20] - Menu8 [Minutes from 00 to 55 in 5-minute increments] OR <ul style="list-style-type: none"> - DA = Prefer not to answer
Quality5INTRO		<p>For each of the next questions, select the one best response. Please answer all questions.</p> <p>By "night" we mean the time period you expect to be sleeping, and by "morning" we mean the time you expect to wake/get up.</p>			
BLOCKQuality5		<p>During the past month, how often have you had trouble sleeping because:</p>			
Quality5a	30446	<p>you cannot get to sleep within 30 minutes?</p>			<p><i>[Select one from]</i></p> <ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer

Quality5b	30447	you wake up in the middle of the night or early morning?			[<i>Select one from</i>] - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5c	30448	you have to get up to use the bathroom?			[<i>Select one from</i>] - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5d	30449	you cannot breathe comfortably?			[<i>Select one from</i>] - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5e	30450	you cough or snore loudly?			[<i>Select one from</i>] - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5f	30451	you feel too cold?			[<i>Select one from</i>] - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5g	30452	you feel too hot?			[<i>Select one from</i>] - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5h	30453	you have bad dreams?			[<i>Select one from</i>] - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5i	30454	you have pain?			[<i>Select one from</i>]

					<ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5j	30455	you find it noisy?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5k	30456	you find the bed uncomfortable?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5l	30457	you are disturbed by the light levels?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5m	30458	you are worried about something?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5n	30459	you are disturbed by children?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5o	30460	you are disturbed by your bed partner?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality5p	30461	of some other reason(s)?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 00=Not during the past month

					<ul style="list-style-type: none"> - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality6	30462	Thinking about a typical night in the past month, how many times did you wake up during the night?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 00=0 times - 01=1-2 times - 02=3-4 times - 03=5-6 times - 04=7-8 times - 05=9-10 times - 06=More than 10 times - DA=Prefer not to answer
Quality7	30463	During the past month, how often have you taken over the counter medicine (non-prescription) to help you sleep?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality8	30464	During the past month, how often have you taken prescription medicine to help you sleep?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality9	30465	During the past month, how often have you had trouble staying awake while driving, eating meals or engaging in social activity?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 00=Not during the past month - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DA=Prefer not to answer
Quality10	30466	During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 00=No problem at all - 01=Only a slight problem - 02=Somewhat of a problem - 03=A very big problem - DA=Prefer not to answer
Quality11	30467	During the past month, how would you rate your sleep quality overall?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=Very good - 02=Fairly good - 03=Fairly bad - 04=Very bad - DA=Prefer not to answer

Quality12IN TRO		For each of the next questions, we would like you to think about your sleep quality in 2019, i.e. before the COVID-19 pandemic began.			
Quality12	30468	In 2019 (i.e. before the pandemic), typically how many nights a week did you have a problem with your sleep (e.g. issues falling asleep, waking in the night, waking before you intended to)?			<p><i>[Select one from]</i></p> <ul style="list-style-type: none"> - 00=Never - 01=Less than once a week - 02=Once or twice a week - 03=Three or more times a week - DK=Do not know/remember - DA=Prefer not to answer
Quality13	30469	Compared to now, how likely were you in 2019 (i.e. before the pandemic) to fall asleep when you didn't intend to?			<p><i>[Select one from]</i></p> <ul style="list-style-type: none"> - 00=Not likely at all - 01=Slightly likely - 02=Moderately likely - 03=Highly likely - DK=Do not know/remember - DA=Prefer not to answer
Quality14	30470	Thinking about a typical night in 2019 (i.e. before the pandemic), how would you have rated your sleep quality? (By "night", we mean the time period you expect to be sleeping.)			<p><i>[Select one from]</i></p> <ul style="list-style-type: none"> - 01=Very good - 02=Fairly good - 03=Fairly bad - 04=Very bad - DK=Do not know/remember - DA=Prefer not to answer
Quality15	30471	Has your usual number of hours of sleep per night changed since 2019 i.e. since before the pandemic? (By "a little bit", we mean less than an hour and by "a lot", we mean more than an hour. By "night", we mean the time period you expect to be sleeping.)			<p><i>[Select one from]</i></p> <ul style="list-style-type: none"> - 01= Yes, I sleep a lot more now compared to before the pandemic - 02= Yes, I sleep a little bit more now compared to before the pandemic - 00= No, the amount I sleep has not changed - 03=Yes, I sleep a little bit less now compared to before the pandemic - 04=Yes, I sleep a lot less now compared to before the pandemic - DK=Do not know/remember - V=It varies significantly - DA=Prefer not to answer
Quality15a	30472	In 2019 (i.e. before the pandemic), how many hours of actual sleep did you get each night? (This may be different to the number of hours you spent in bed.)			<p><i>[Menu9 only allowing one selection, of an integer between 0 and 20. Menu9 is suffixed "hour(s)"]</i></p> <p><i>[Menu10 only allowing one selection, of minutes from 00 to 55 in 5-minute increments. Menu10 is suffixed "minutes". If Quality15a=Prefer not to answer (DA), no other selection can be made.]</i></p> <ul style="list-style-type: none"> - Menu9 [Hours from 0 to 20] - Menu10 [Minutes from 00 to 55 in 5-minute increments]

					OR - DA = Prefer not to answer
Quality15b	30473	Please tell us why. (Select all that apply)			<p>[Select one or more from 01-07. DK and DA are exclusive. If Quality15b=Do not know (DK) or Prefer not to answer (DA), no other selection can be made]</p> <ul style="list-style-type: none"> - 01=I have retired - 02=I have changed my job - 03=I have changed my working hours e.g. gone part-time or begun working shifts - 04=I now work from home so I no longer need to commute - 05=I have/had physical health issues - 06=I have/had mental health issues - 07=Other reason(s) - DK=Do not know - DA=Prefer not to answer
Insomnia					
SCI-INTRO		We would like to know more about your quality of sleep. By "night" we mean the time period you expect to be sleeping, and by "morning" we mean the time you expect to wake/get up.			
BLOCK SCI1		Thinking about a typical night in the past month...			[Select one from the following for each of the statements]
SCI1a	30474	... how long does it take you to fall asleep?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 01=0-15 mins - 02=16-30 mins - 03=31-45 mins - 04=46-60 mins - 05=61 mins or more - DA=Prefer not to answer
SCI1b	30536	If you then wake up during the night, how long are you awake for in total? (add all the awakenings up)			<p>[Select one from]</p> <ul style="list-style-type: none"> - 01=0-15 mins - 02=16-30 mins - 03=31-45 mins - 04=46-60 mins - 05=61 mins or more - DA=Prefer not to answer
SCI1c	30537	... how long before you <i>intend</i> to wake up do you actually wake up? (e.g. if you want to wake up at 7am but wake up at 6:15am most)			<p>[Select one from]</p> <ul style="list-style-type: none"> - 01=I don't wake up too early - 02=Up to 15 mins early - 03=16-30 mins early

		mornings, this would be a difference of 45 minutes.)			- 04=31-45 mins early - 05=46-60 mins early - 06=More than 60 mins early - DA=Prefer not to answer
SCI1d	30538	... how many nights a week do you have a problem with your sleep?			[Select one from] - 01=0-1 - 02=2 - 03=3 - 04=4 - 05=5-7 - DA=Prefer not to answer
SCI1e	30539	... how would you rate your sleep quality?			[Select one from] - 01=Very good - 02=Good - 03=Average - 04=Poor - 05=Very poor - DA=Prefer not to answer
BLOCK SCI2		Thinking about the past month, to what extent has poor sleep...			
SCI2a	30540	... affected your mood, energy or relationships?			[Select one from] - 01=Not at all - 02=A little - 03=Somewhat - 04=Much - 05=Very much - DA=Prefer not to answer
SCI2b	30541	... affected your concentration, productivity or ability to stay awake?			[Select one from] - 01=Not at all - 02=A little - 03=Somewhat - 04=Much - 05=Very much - DA=Prefer not to answer
SCI2c	30542	... troubled you in general?			[Select one from] - 01=Not at all - 02=A little - 03=Somewhat - 04=Much - 05=Very much - DA=Prefer not to answer
SCI3	30543	Finally....			[Select one from] - 01=I don't have a problem

		... how long have you had a problem with your sleep?			<ul style="list-style-type: none"> - 02=Less than 1 month - 03=1-2 months - 04=3-6 months - 05=7-12 months - 06=1-5 years - 07=6-10 years - 08=More than 10 years - DA=Prefer not to answer
Sleep disturbances					
CRD-INTRO		We would like to know about any sleep problems and symptoms often associated with sleep problems that you might experience.			
CRD1	30544	Do you tend to sleep well but just at the "wrong times"?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=Yes - 00=No - DA=Prefer not to answer
CRD1a	30545	Can you sleep well enough, but only if you stay up very late?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=Yes - 00=No - DA=Prefer not to answer
CRD1b	30546	Are you in a very sound sleep at normal waking time and could sleep on for hours more?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=Yes - 00=No - DA=Prefer not to answer
CRD1c	30547	Can you sleep well enough, but only if you go to bed very early?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=Yes - 00=No - DA=Prefer not to answer
CRD1d	30548	Do you wake very early, bright and alert and no longer sleepy?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=Yes - 00=No - DA=Prefer not to answer
BLOCKNar1		Do you currently experience any of these types of muscle weakness in the following situations? (please select all that apply)			
Nar1a	30549	Buckling of the knees?			<i>[Select one or more from 01-05. 06, 00 and DA are exclusive. If Nar1a= I used to but not currently (06) or I have never experienced this (00) or Prefer not to answer (DA), no other selection can be made]</i> <ul style="list-style-type: none"> - 01=When I tell or hear a joke - 02=When I laugh - 03=When I am angry

					<ul style="list-style-type: none"> - 04=When I am making a quick verbal response in a playful context - 05=In a different situation - 06=I used to but not currently - 00=I have never experienced this - DA=Prefer not to answer
Nar1b	30550	Sagging or dropping of your jaw?			<p><i>[Select one or more from 01-05. 06, 00 and DA are exclusive. If Nar1b= I used to but not currently (06) or I have never experienced this (00) or Prefer not to answer (DA), no other selection can be made]</i></p> <ul style="list-style-type: none"> - 01=When I tell or hear a joke - 02=When I laugh - 03=When I am angry - 04=When I am making a quick verbal response in a playful context - 05=In a different situation - 06=I used to but not currently - 00=I have never experienced this - DA=Prefer not to answer
Nar1c	30551	Abrupt dropping of your head and/or shoulders?			<p><i>[Select one or more from 01-05. 06, 00 and DA are exclusive. If Nar1c= I used to but not currently (06) or I have never experienced this (00) or Prefer not to answer (DA), no other selection can be made]</i></p> <ul style="list-style-type: none"> - 01=When I tell or hear a joke - 02=When I laugh - 03=When I am angry - 04=When I am making a quick verbal response in a playful context - 05=In a different situation - 06=I used to but not currently - 00=I have never experienced this - DA=Prefer not to answer
Nar1d	30552	Weakness in your arms?			<p><i>[Select one or more from 01-05. 06, 00 and DA are exclusive. If Nar1d= I used to but not currently (06) or I have never experienced this (00) or Prefer not to answer (DA), no other selection can be made]</i></p> <ul style="list-style-type: none"> - 01=When I tell or hear a joke - 02=When I laugh - 03=When I am angry - 04=When I am making a quick verbal response in a playful context - 05=In a different situation - 06=I used to but not currently - 00=I have never experienced this - DA=Prefer not to answer
Nar1e	30553	Slurring of speech?			<p><i>[Select one or more from 01-05. 06, 00 and DA are exclusive. If Nar1e= I used to but not currently (06) or I have never experienced this (00) or Prefer not to answer (DA), no other selection can be made]</i></p> <ul style="list-style-type: none"> - 01=When I tell or hear a joke - 02=When I laugh

					<ul style="list-style-type: none"> - 03=When I am angry - 04=When I am making a quick verbal response in a playful context - 05=In a different situation - 06=I used to but not currently - 00=I have never experienced this - DA=Prefer not to answer
Nar1f	30554	Falling to the ground, unable to move?			<p><i>[Select one or more from 01-05. 06, 00 and DA are exclusive. If Nar1f= I used to but not currently (06) or I have never experienced this (00) or Prefer not to answer (DA), no other selection can be made]</i></p> <ul style="list-style-type: none"> - 01=When I tell or hear a joke - 02=When I laugh - 03=When I am angry - 04=When I am making a quick verbal response in a playful context - 05=In a different situation - 06=I used to but not currently - 00=I have never experienced this - DA=Prefer not to answer
Para1	30555	How often do you walk in your sleep?			<p><i>[Select one from]</i></p> <ul style="list-style-type: none"> - 00=Never - 01=Not in the past year - 02=1-2 times per year - 03=1-2 times per month - 04=1-2 times per week - 05=3-4 times per week - 06=Almost every day - 07=Every day - DK=Do not know - DA=Prefer not to answer
Para2	30556	Do you grind your teeth while you sleep?			<p><i>[Select one from]</i></p> <ul style="list-style-type: none"> - 00=Never - 01=Not in the past year - 02=1-2 times per year - 03=1-2 times per month - 04=1-2 times per week - 05=3-4 times per week - 06=Almost every day - 07=Every day - DK=Do not know - DA=Prefer not to answer
Para3	30557	Have you ever been told, or suspected yourself, that you seem to 'act out your dreams' while asleep (for			<p><i>[Select one from]</i></p> <ul style="list-style-type: none"> - 01=Yes - 00=No - DK=Do not know

		example, flailing your arms in the air, making running movements, etc.)?			- NA=Not applicable - DA=Prefer not to answer
Para4	30558	How often do you have violent or injurious behaviour during sleep (for example, punching, kicking, leaping or running away from the bed)?			[Select one from] - 00=Never - 01=Not in the past year - 02=1-2 times per year - 03=1-2 times per month - 04=1-2 times per week - 05=3-4 times per week - 06=Almost every day - 07=Every day - DK=Do not know - DA=Prefer not to answer
Para5	30559	How often do you have nightmares (frightening dreams)?			[Select one from] - 00=Never - 01=Not in the past year - 02=1-2 times per year - 03=1-2 times per month - 04=1-2 times per week - 05=3-4 times per week - 06=Almost every day - 07=Every day - DK=Do not know - DA=Prefer not to answer
Para5a	30560	How often do you remember your dreams?			[Select one from] - 00=Never - 01=Not in the past year - 02=1-2 times per year - 03=1-2 times per month - 04=1-2 times per week - 05=3-4 times per week - 06=Almost every day - 07=Every day - DK=Do not know - DA=Prefer not to answer
Para6	30561	Do you have seizures, convulsions or "fits" during sleep?			[Select one from] - 01=Yes - 00=No - DK=Do not know - DA=Prefer not to answer
ApniINTRO		Please choose the correct response to each question.			

Apn1	30562	Do you snore?			<i>[Select one from]</i> 01=Yes 00=No DK=Do not know DA=Prefer not to answer
Apn1a	30563	Your snoring is:			<i>[Select one from]</i> 01=Slightly louder than breathing 02=As loud as talking 03=Louder than talking DK=Do not know DA=Prefer not to answer
Apn1b	30564	How often do you snore?			<i>[Select one from]</i> - 01=Almost every day - 02=3-4 times per week - 03=1-2 times per week - 04=1-2 times per month - 05=Rarely or never - DK=Do not know - DA=Prefer not to answer
Apn1c	30565	Has your snoring ever bothered other people?		Field ID: 1210 (Touchscreen sleep questions)	<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know - NA=Not applicable - DA=Prefer not to answer
Apn2	30566	Has anyone noticed that you stop breathing during your sleep?			<i>[Select one from]</i> - 01=Almost every day - 02=3-4 times per week - 03=1-2 times per week - 04=1-2 times per month - 05=Rarely or never - DK=Do not know - NA=Not applicable - DA=Prefer not to answer
Apn3	30567	How often do you feel tired or fatigued after your sleep?			<i>[Select one from]</i> - 01=Almost every day - 02=3-4 times per week - 03=1-2 times per week - 04=1-2 times per month - 05=Rarely or never - DA=Prefer not to answer

Apn4	30568	During your waking time, do you feel tired, fatigued or not up to par?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 01=Almost every day - 02=3-4 times per week - 03=1-2 times per week - 04=1-2 times per month - 05=Rarely or never - DA=Prefer not to answer
Apn5	30569	Have you ever nodded off or fallen asleep while driving a vehicle?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 01=Yes - 00=No - NA=Not applicable - DA=Prefer not to answer
Apn5a	30570	How often have you nodded off or fallen asleep while driving a vehicle?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 01=Almost every day - 02=3-4 times a week - 03=1-2 times per week - 04=1-2 times per month - 05=Rarely or never - DA=Prefer not to answer
Apn6	30571	Thinking about the last year, how many times have you had an accident (motor vehicle, home or work related) or a near miss due to sleepiness?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 01=More than 10 times - 02=5-10 times - 03=2-5 times - 04=Once - 00=Never had an accident or near miss due to sleepiness - DK=Do not know - DA=Prefer not to answer
Fatigue					
FATIGUE-INTRO		We would like to know a little bit about your experience of fatigue.			
FATIGUE-INTRO1		We are interested in the extent that you have felt fatigued (tired, weary, exhausted) over the last two weeks . We do not mean feelings of sleepiness (the likelihood of falling asleep). Please select the appropriate response in accordance with your average feelings over this two-week period.			
F1	30572	Was fatigue a problem for you?			<p>[Select one from]</p> <ul style="list-style-type: none"> - 00=0 - Not at all

					<ul style="list-style-type: none"> - 01=1 - 02=2 - Moderately - 03=3 - 04=4 - Extremely
F2	30573	Did fatigue cause problems with your everyday functioning (e.g., work, social, family)?		Field ID: 120127 (Pain questionnaire)	<i>[Select one from]</i> <ul style="list-style-type: none"> - 00=0 - Not at all - 01=1 - 02=2 - Moderately - 03=3 - 04=4 - Extremely
F3	30574	Did fatigue cause you distress?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 00=0 - Not at all - 01=1 - 02=2 - Moderately - 03=3 - 04=4 - Extremely
F4	30575	How often did you suffer from fatigue?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 00=0 days per week - 01=1-2 days per week - 02=3-4 days per week - 03=5-6 days per week - 04=7 days per week
F5	30576	At what time(s) of the day did you typically experience fatigue? (Please select all that apply)			<i>[Select one or more from]</i> <ul style="list-style-type: none"> - 00=Early morning - 01=Mid morning - 02=Midday - 03=Mid afternoon - 04=Late afternoon - 05=Early evening - 06=Late evening
F6	30577	How severe was the fatigue you experienced?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 00=0 - Not at all - 01=1 - 02=2 - Moderate - 03=3 - 04=4 - Extreme
F7	30578	How much was your fatigue caused by poor sleep?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 00=0 - Not at all - 01=1 - 02=2 - Moderate - 03=3 - 04=4 - Extreme
Restless legs					

RLSINTRO		We'd like to know about any issues that you might experience with restless legs.			
RLS1	30579	Do you have recurrent uncomfortable feelings or sensations in your legs while you are sitting or lying down?			<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know - DA=Prefer not to answer
RLS2	30580	Do you have a recurrent need or urge to move your legs while you are sitting or lying down?			<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know - DA=Prefer not to answer
RLS3	30581	Are you more likely to have these feelings in your legs when you are resting (either sitting or lying down) or when you are physically active?			<i>[Select one from]</i> - 01=Resting - 00=Active - DK=Do not know - DA=Prefer not to answer
RLS4	30582	If you get up or move around when you have these feelings in your legs, do these feelings get any better while you actually keep moving?			<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know - DA=Prefer not to answer
RLS5	30583	Which time(s) of day are these feelings in your legs most likely to occur? (Please select one or more responses.)			<i>[Select one or more from 01-05. 06, DK and DA are exclusive. If RLS5=About equal at all times (06) or do not know (DK) or Prefer not to answer (DA), no other selection can be made.]</i> - 01=Morning - 02=Mid-day - 03=Afternoon - 04=Evening - 05=Night - 06=About equal at all times - DK=Do not know - DA=Prefer not to answer
RLS6	30584	Will simply changing leg position once without continuing to move usually relieve these feelings in your legs?			<i>[Select one from]</i> - 01=Usually relieves - 02= Does not usually relieve - DK=Do not know - DA=Prefer not to answer
RLS7	30585	Are these feelings in your legs always due to muscle cramps?			<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know

RLS8	32070	In the past 12 months, how often did you experience these feelings in your legs?			- DA=Prefer not to answer [Select one from] - 01=6-7 days per week - 02=4-5 days per week - 03=2-3 days per week - 04=1 day per week - 05=2 days per month - 06=1 day per month or less - 00=Never - DK=Do not know - DA=Prefer not to answer
Sleep consequences					
SSS-INTRO		We would like you to tell us about situations that cause you to fall asleep when you don't intend to.			
SSS1	32071	In the past two weeks, how likely is it that you would fall asleep without intending to, or that you would struggle to stay awake while you were doing things?		Field ID: 1220 (Touchscreen questionnaire)	[Select one from] - 00=No chance - 01=Slight chance - 02=Moderate chance - 03=High chance - DA=Prefer not to answer
SSS1_ALT	32072	Over the past two weeks, how likely is it that you would unintentionally fall asleep or doze off while you were doing things?		Field ID: 1220 (Touchscreen questionnaire)	[Select one from] - 00=No chance - 01=Slight chance - 02=Moderate chance - 03=High chance - DA=Prefer not to answer
SSS1_ALT2	32073	Over the past two weeks, how likely is it that you would unintentionally fall asleep or doze off?		Field ID: 1220 (Touchscreen questionnaire)	[Select one from] - 00=No chance - 01=Slight chance - 02=Moderate chance - 03=High chance - DA=Prefer not to answer
BLOCK_SS S2		How likely are you to have difficulties staying awake in the following situations? This refers to how you have felt in the last 2 weeks. 0=No chance			

		<p>1=Slight chance 2=Moderate chance 3=High chance NA=Not applicable</p> <p>It is important that you answer each question as best as you can.</p>			
BLOCK_SS S2_ALT		<p>Over the past two weeks, how likely is it that you would unintentionally fall asleep or doze off while doing the following activities?</p> <p>0=No chance 1=Slight chance 2=Moderate chance 3=High chance NA=Not applicable</p> <p>It is important that you answer each question as best as you can.</p>			
BLOCK_SS S2_ALT2		<p>Over the past two weeks, how likely is it that you would fall asleep or doze off while doing the following activities?</p> <p>0=No chance 1=Slight chance 2=Moderate chance 3=High chance NA=Not applicable</p> <p>It is important that you answer each question as best as you can.</p>			
SSS2a	32074	Sitting at a desk/table working on a computer or tablet			<p><i>[Select one from]</i></p> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable

SSS2a_ALT	32075	Sitting at a desk/table working on a computer or tablet			<i>[Select one from]</i> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2a_ALT 2	32076	Sitting at a desk/table working on a computer or tablet			<i>[Select one from]</i> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2b	32077	Talking to someone on the phone			<i>[Select one from]</i> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2b_ALT	32078	Talking to someone on the phone			<i>[Select one from]</i> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2b_ALT 2	32079	Talking to someone on the phone			<i>[Select one from]</i> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2c	32080	In a meeting with several people			<i>[Select one from]</i> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2c_ALT	32081	In a meeting with several people			<i>[Select one from]</i>

					<ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2c_ALT 2	32082	In a meeting with several people			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2d	32083	Listening to someone talking in a class, lecture or at church			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2d_ALT	32084	Listening to someone talking in a class, lecture or at church			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2d_ALT 2	32085	Listening to someone talking in a class, lecture or at church			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2e	32086	Playing cards or a board game with others			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2e_ALT	32087	Playing cards or a board game with others			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance

					<ul style="list-style-type: none"> - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2e_ALT 2	32088	Playing cards or a board game with others			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2f	32089	Driving a car			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2f_ALT	32090	Driving a car			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2f_ALT 2	32091	Driving a car			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2g	32092	Playing a videogame			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2g_ALT	32093	Playing a videogame			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance

					<ul style="list-style-type: none"> - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2g_ALT 2	32094	Playing a videogame			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2h	32095	Lying down trying to take a nap			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2h_ALT	32096	Lying down trying to take a nap			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2_ALT2	32097	Lying down to rest			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2i	32098	Travelling as a passenger in a bus, train or car for more than 30 minutes			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2i_ALT	32099	Travelling as a passenger in a bus, train or car for more than 30 minutes			<i>[Select one from]</i> <ul style="list-style-type: none"> - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance

					- NA=Not applicable
SSS2i_ALT 2	32100	Travelling as a passenger in a bus, train or car for more than 30 minutes			[Select one from] - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2j	32101	Watching a movie/film at home			[Select one from] - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2j_ALT	32102	Watching a movie/film at home			[Select one from] - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
SSS2j_ALT 2	32103	Watching a movie/film at home			[Select one from] - 0=No chance - 1=Slight chance - 2=Moderate chance - 3=High chance - NA=Not applicable
BLOCK-CC1		Please rate your problems with concentration, memory, and thinking skills during the past 7 days.			
CC1a	32104	Forgetfulness/memory problems			[Select one from] - 00=Not at all - 01=Some - 02=Quite a bit - 03=Very much - DA=Prefer not to answer
CC1b	32105	Poor concentration			[Select one from] - 00=Not at all - 01=Some - 02=Quite a bit

					- 03=Very much - DA=Prefer not to answer
CC1c	32106	Trouble expressing my thoughts			[Select one from] - 00=Not at all - 01=Some - 02=Quite a bit - 03=Very much - DA=Prefer not to answer
CC1d	32107	Trouble finding the right word			[Select one from] - 00=Not at all - 01=Some - 02=Quite a bit - 03=Very much - DA=Prefer not to answer
CC1e	32108	Slow thinking speed			[Select one from] - 00=Not at all - 01=Some - 02=Quite a bit - 03=Very much - DA=Prefer not to answer
CC1f	32109	Trouble figuring things out or solving problems			[Select one from] - 00=Not at all - 01=Some - 02=Quite a bit - 03=Very much - DA=Prefer not to answer
Family history					
FH-INTRO		We would like to know a little bit about the sleep patterns of your family members.			
FH1	32110	How many full brothers and sisters (living or deceased) do you have from the same birth parents?			[Select one from] - 00=0 - 01=1 - 02=2 - 03=3 - 04=4 - 05=5 - 06=6 - 07=7 or more - DK=Do not know - DA=Prefer not to answer
BLOCK-FH2		Have any close BLOOD relatives (including brother/sister,			

		mother/father, son/daughter) had any of the following?			
FH2a	32111	Insomnia (difficulty falling asleep or staying asleep)			<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know - DA=Prefer not to answer
FH2b	32112	Sleep apnoea (breathing pauses during sleep)			<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know - DA=Prefer not to answer
FH2c	32113	Narcolepsy (difficulty staying awake or having "sleep attacks")			<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know - DA=Prefer not to answer
FH2d	32114	Restless leg syndrome (RLS) (uncontrollable urge to move the legs)			<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know - DA=Prefer not to answer
FH2e	32115	Sleep walking			<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know - DA=Prefer not to answer
FH2f	32116	Night terrors (partial waking from sleep with behaviours such as screaming, kicking, panic, sleep walking, thrashing or mumbling)			<i>[Select one from]</i> - 01=Yes - 00=No - DK=Do not know - DA=Prefer not to answer
Lifestyle routines					
BLOCK-LR1		During the past month how often have you done any of the following?			
LR1a	32117	Used a sleep-tracking device to monitor your sleep pattern? For example, using a wristband (e.g. Fitbit) or smartphone app?			<i>[Select one from]</i> - 01=Daily - 02=More than once a week - 03=3-4 times - 04=1-2 times - 05=Have a sleep-tracking device but did not use it in last month

					- NA=Do not have a sleep-tracking device - DA=Prefer not to answer
LR1b	32118	Travelled to other time zones?			[Select one from] - 01=Daily - 02=More than once a week - 03=3-4 times - 04=1-2 times - 05=Not at all - DA=Prefer not to answer
LR1c	32119	Consumed alcohol to help you fall asleep?			[Select one from] - 01=Daily - 02=More than once a week - 03=3-4 times - 04=1-2 times - 05=Not at all - DA=Prefer not to answer
LR1d	30475	Napped or dozed during the day?		Field ID: 1190 (Touchscreen questionnaire)	[Select one from] - 01=Daily - 02=More than once a week - 03=3-4 times - 04=1-2 times - 05=Not at all - DA=Prefer not to answer
LR1di	30476	When you do nap during the day, how long do you typically nap for?			[Select one from] - 01=0-20 minutes - 02=21-40 minutes - 03=41-60 minutes - 04=1-2 hours - 05=More than 2 hours - DK=Do not know - DA=Prefer not to answer
LR1e	30477	Exercised in a way that required a moderate amount of effort or noticeably accelerated your heart rate?			[Select one from] - 01=Daily - 02=More than once a week - 03=3-4 times - 04=1-2 times - 05=Not at all - NA=Unable to exercise - DA=Prefer not to answer
LR1ei	30478	What time of the day do you usually exercise?			[Select one from] - 01=Early morning - 02=Late morning - 03=Early afternoon

					<ul style="list-style-type: none"> - 04=Late afternoon - 05=Between evening meal and bedtime - 06=Varies significantly - DA=Prefer not to answer
LR2	30479	How long before bedtime do you last use a computer, tablet, mobile phone or television?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=I use them in bed - 02=Less than 1 hour - 03=1-2 hours - 04=2-3 hours - 05=3 hours or longer - NA=Not applicable - DA=Prefer not to answer
LR3	30480	How many servings of caffeine do you typically have in one day? (one serving equals one small mug of tea or coffee, or one can of caffeinated soft drinks, e.g. cola or energy drink)			<ul style="list-style-type: none"> - Number OR - 01=I rarely or never drink caffeine - DA=Prefer not to answer
LR3a	30481	What time of day do you usually drink your last caffeinated drink?			<i>[Select one from]</i> <ul style="list-style-type: none"> - 01=Early morning - 02=Late morning - 03=Early afternoon - 04=Late afternoon - 05=Between evening meal and bedtime - 06=Varies significantly - DA=Prefer not to answer
LR4	30482	In a typical day in summer, how many hours do you spend outdoors?	Field ID: 1050 (Touchscreen questionnaire)		<ul style="list-style-type: none"> - Number OR -10=Less than an hour a day -1=Do not know -3=Prefer not to answer
LR5	30483	In a typical day in winter, how many hours do you spend outdoors?	Field ID: 1060 (Touchscreen questionnaire)		<ul style="list-style-type: none"> - Number OR -10=Less than an hour a day -1=Do not know -3=Prefer not to answer
Recent feelings					
PHQ-4 INTRO		We would like to know about how you have been feeling recently.			

BLOCK PHQ-4 1		Over the last 2 weeks, how often have you been bothered by any of the following problems?			
PHQ-4 1a	30484	Feeling nervous, anxious or on edge	Field ID: 20506 (Mental health questionnaire) Field ID: 28735 (Health and well-being questionnaire) Field ID: 29058 (Mental well-being questionnaire)		<i>[Select one from]</i> - 01=Not at all - 02=Several days - 03=More than half the days - 04=Nearly every day - DA=Prefer not to answer
PHQ-4 1b	30485	Not being able to stop or control worrying	Field ID: 20509 (Mental health questionnaire) Field ID: 28736 (Health and well-being questionnaire) Field ID: 29059 (Mental well-being questionnaire)		<i>[Select one from]</i> - 01=Not at all - 02=Several days - 03=More than half the days - 04=Nearly every day - DA=Prefer not to answer
PHQ-4 1c	30486	Little interest or pleasure in doing things	Field ID: 20514 (Mental health questionnaire) Field ID: 120104 (Pain questionnaire) Field ID: 28737 (Health and		<i>[Select one from]</i> - 01=Not at all - 02=Several days - 03=More than half the days - 04=Nearly every day - DA=Prefer not to answer

			well-being questionnaire) Field ID: 29002 (Mental well-being questionnaire)		
PHQ-4 1d	30487	Feeling down, depressed or hopeless	Field ID: 20510 (Mental health questionnaire) Field ID: 120105 (Pain questionnaire) Field ID: 28738 (Health and well-being questionnaire) Field ID: 29003 (Mental well-being questionnaire)		<i>[Select one from]</i> - 01=Not at all - 02=Several days - 03=More than half the days - 04=Nearly every day - DA=Prefer not to answer