demographic and quantitative, and thematic qualitative data are presented.

Results 351 (27%) of SATA members responded; 70% were male, 93% ≥45 years and 62% with severe pre-treatment OSA symptoms. 44% learned about SATA via their sleep clinic, 5% from GPs, and 32% via search-engines. Over 87% had visited the SATA website at least twice. Two-thirds were satisfied or very satisfied with the content, 31% were neutral and only 3% were dissatisfied. 49% 'often' found the information they sought, 43% 'occasionally', and 8% 'rarely or never'. Areas highlighted for improvement included the dated and cluttered appearance, and difficulty navigating the site. Further information was requested re OSA research, equipment maintenance and reviews, DVLA guidelines, and other patients' experiences.

Discussion Most SATA members became aware of the patient charity support only after visiting secondary care suggesting the need to create stronger links with the public and primary care. Once aware of SATA's website, many patients made multiple visits gaining good quality information. Key data was obtained for phase II of this project, which is to increase accessibility and the interactive nature of the website.

P038 INVESTIGATING THE IMPACT OF POOR SLEEP ON CARDIOVASCULAR HEALTH AND CEREBROVASCULAR BURDEN IN HEALTHY AGEING USING THE UK BIOBANK DATA

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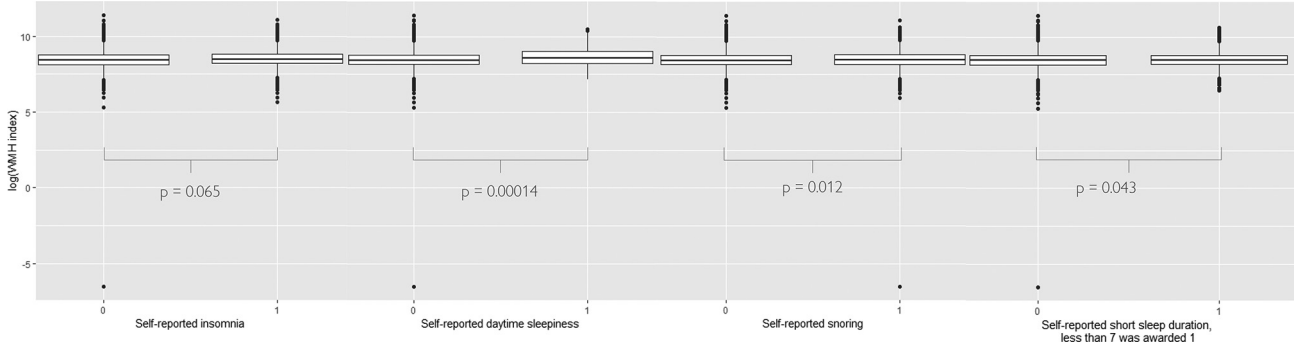
10.1136/bmjresp-2019-bssconf.38

Introduction Poor sleep[1] as well as white matter hyperintensities (WMH), which are macroscale markers of cerebrovascular health indicating white matter lesion,[2] have been shown to increase the risk of dementia. However, the relationship between these two putative risk factors of dementia is unclear.



Abstract P038 Figure 1 Self-reported variables of poor sleep are linked to a higher white matter hyperintensity (WMH) load. Patients with complaints (score of 1) about insomnia, daytime sleepiness, snoring and short sleep duration (less than 7 hours per night) had a higher WMH load index than those that did not report any complaint (score of 0). T-tests were used to compare all 4 sets of data. The WMH load index is log-transformed.

Variable	Estimate	P-value
Log(sleep burden score)	**0.00553**	0.027
Age	0.03354	**$< 2.2 * 10^{-16}$**
BMI	0.01243	**$6.8 * 10^{-10}$**
Diastolic blood pressure	**0.00301**	**0.0068**
Systolic blood pressure	0.00039	0.55
whr	**-0.63144**	**$2.33 * 10^{-9}$**
APOE	**0.12987**	**0.028**
Diabetes	**0.12803**	**0.0011**
Cholesterol	0.03961	0.090
Hypertension	**0.13089**	**$3.24 * 10^{-5}$**
High blood pressure (disagnosed)	-0.00232	0.94

Abstract P038 Table 1 The sleep burden score, corresponding to the presence of insomnia, snoring, daytime sleepiness and short sleep duration, significantly predicts white matter hyperintensity (WMH) load. A multiple linear regression was performed, controlling for age, body mass index (BMI), blood pressure (diastolic and systolic), waste-hip ratio (whr), the genetic status of alipoproteinE (APOE), health conditions including diabetes, high cholesterol, hypertension and high blood pressure (adjusted R-squared: 0.18, p-value: < 2.2 10-16). Significant variables are indicated in bold.

Method Here we use data from the UK Biobank (N=5505, aged from 45 to 73) to elucidate the effect of poor sleep (insomnia, snoring, daytime sleepiness and short sleep duration) on WMH load. The sleep variables were obtained using a digital questionnaire, whereas the WMH load was derived from automated segmentation of T2 FLAIR magnetic resonance images using the BIANCA tool in FSL.

Results We show that age, snoring and daytime sleepiness significantly predict a higher WMH load (linear model, adjusted $R^2=0.13$, $p<0.0001$). The WMH load of patients with potential sleep issues is significantly larger than those who reported no sleep issue (figure 1). Markers of poor sleep are associated with a higher body mass index (BMI) (linear model, adjusted $R^2=0.041$, $p<0.0001$). A small but significant relationship exists between age, BMI and WMH (linear model, adjusted $R^2=0.14$, $p<0.0001$).

Finally, a sleep burden score summing poor sleep markers significantly predicted the WMH load, when controlling for cardiovascular factors (table 1). Removing the sleep burden score leads to a significant decrease in the power of the model (ANOVA, $p=0.027$).

Discussion This exploratory analysis confirms the impact of measures of poor sleep on cerebrovascular health, proposing a complex relationship between sleep and WMH loads involving cardiovascular features [3 4] in a large ageing population. Further work will examine the wider implications of measures of poor sleep on cognition and brain function.

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P039 REM SLEEP AND DREAM REPORTS IN FREQUENT CANNABIS VERSUS NON-CANNABIS USERS

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10.1136/bmjresp-2019-bssconf.39

Tetrahydrocannabinidiol (THC; one of the main psychoactive components of cannabis) has been shown to suppress REM sleep[1-4] and affect sleep latency,[4 5] although these findings are not consistently replicated.[3 4 6] Cannabis use is also reported to affect dreaming frequency.[7] Most studies investigating cannabis use and sleep have been laboratory-based, while only a limited body of research exists on dream occurrence and cannabis use. This study aimed to pilot the measurement of participants sleeping at home in their usual surroundings, in order to assess effects of cannabis use compared to non-use, on objective sleep measures, dream reports, and self-reported anxiety, memory, and sleep quality. Eleven frequent cannabis users versus 8 non-users proceeded in their usual routines, and wore Hypnodyne Zmax portable sleep acquisition headbands (recording EEG, EOG and EMG) while sleeping at home over two consecutive nights. Participants gave dream reports in three awakenings, set at two-hourly intervals on each night, and once upon morning awakening, reporting dream content and subjective ratings of the dream's bizarreness, emotionality, and sensory experience. In addition, participants completed problem cannabis use, lifetime and nightly cannabis use, PSQI, everyday memory and trait anxiety measures. No differences were reported by participants in sleep quality, anxiety or memory between the two groups; predictably, cannabis users reported significantly more problems in relation to use of the drug. Cannabis users demonstrated significantly longer sleep latency and less REM sleep overall; no other differences occurred in objective sleep measures between groups. Cannabis users reported higher bizarreness in their dreams, but no differences were reported in dream recall or other dream measures. It is noted that small sample sizes limit the generality of findings in this study. The procedure provides a useful paradigm and encouraging initial results, however, for contemporary research related to cannabis use and sleep in naturalistic conditions, in this ongoing project.

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P040 ASSOCIATION BETWEEN SLEEP DURATION AND MACRONUTRIENT INTAKE IN PEOPLE WITH TYPE 2 DIABETES

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10.1136/bmjresp-2019-bssconf.40

Introduction Diet and sleep duration are both associated with Type 2 Diabetes (T2D). However, the longitudinal associations between macronutrient intake and sleep duration in people with T2D are unknown. We aimed to explore associations over 12 months in the Early-ACTID trial of usual care vs. a diet or diet+ physical activity interventions.[1]

Method Diet was assessed using 4-day estimated food diaries and average sleep duration in minutes was computed from self-reported usual sleep and wake times at baseline, 6- and 12-months post-intervention. Associations between percent total energy intake (%TEI) from fat, protein, carbohydrate and sleep duration were assessed using isoenergetic multiple linear regression substitution models, adjusting for TEI, and potential confounders.