

## MIDLANDS SLEEP GROUP NEWSLETTER

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### **Election of MSG Co-Chairs**

In the last MSG business meeting held on Dec 2021, Prof Brendan Cooper was re-elected as Co-Chair of the MSG, from the clinical side, and Dr Isabel Morales-Muñoz was elected as Co-chair of the MSG, from the research side.

BRENDAN is a Consultant Clinical Scientist in Respiratory Physiology at Queen Elizabeth Hospital Birmingham and Honorary Professor in Respiratory & Sleep Physiology at the University of Birmingham.

ISABEL is Assistant Professor at the School of Psychology, at the University of Birmingham.

### **Welcome to New Members of the MSG**

DR SIMONE WHARTON joined the MSG as core member in November 2021. Simon is a specialist in Respiratory Medicine at Birmingham Heartlands Hospital (UHB). Simon qualified as a respiratory physician but after being appointed consultant at QMC Nottingham, he became increasingly interested in Sleep Medicine. Heartlands Hospital has a full sleep laboratory, so he moved to Birmingham in 2014 to pursue his interest. His major interests are non-respiratory sleep disorders.

DR MARTINA DE LILLO joined the MSG as affiliated member in December 2021. Martina is a Research Fellow at the School of Psychology, at the University of Birmingham, under the supervision of Dr Andrew Surtees. Her research focuses on the effect of sleep deprivation on social cognition.

DR GEORGIE AGAR joined the MSG as affiliated member in January 2022. Georgie is currently a Research Fellow at the Richards Lab, at the University of Birmingham. She is experienced in conducting objective sleep research with children with intellectual disability and behaviours that challenge.

DR ANNA HAMILTON joined the MSG as affiliated member in January 2022. Anna is currently a Research Fellow at the Richards Lab, at the University of Birmingham. Her main research interests are paediatric sleep and childhood and developmental conditions. In particular, she is interested in the effects of disturbed sleep on academic achievement, cognitive development and psychological well-being in children.

PROF NICOLE TANG joined the MSG as core member in February 2022. Nicole is a registered clinical and health psychologist with extensive research experience in sleep, insomnia, chronic pain and mental health. She is currently Professor of Psychology at the University of Warwick. She is the Director of the Warwick Sleep and Pain Laboratory and Academic Lead of the Warwick Health Global Research Priority Mental Health Theme.

DR JULIE LLOYD joined the MSG as core member in March 2022. Julie works as Service Lead/Clinical Scientist at the Lung Function & Sleep Department, Good Hope site, University Hospitals Birmingham. Julie's research interests are Sleep Medicine, Non-Invasive Ventilation and Respiratory Physiology.

DR MAGDALENA CHECHLACZ joined the MSG as core member in March 2022. Magda is Assistant Professor in Cognition and Ageing, at the School of Psychology, at the University of Birmingham. Her research is broadly concerned with understanding how variability in the neurochemical, structural and functional organisation of the brain affect cognitive performance, as well as whether and how these individual differences predict the susceptibility to neurological disorders and the way we age. Further, her current research has a particular focus on how changes in sleep patterns can affect cognitive decline as we age.

DR CHETANA KALLAPPA joined the MSG as core member in April 2022. Chetana is a sleep paediatrician at Sandwell and West Birmingham Hospitals NHS Trust.

## Recent Grants, Prizes and Scholarships

### Grants:

Objective Actigraphy Study in Sleep of Children with Intellectual Disability and their Siblings (OASSIS-IDS): Direct assessment of sleep in children with intellectual disability, complex health needs and their siblings. Bissell, S. (Co-PI), Richards, C. (Co-PI), Agar, G., Hastings, R., de Vries, P., Bagshaw, A. & Hill, C. Baily Thomas Charitable Fund. October 2022 – September 2024.

Cerebra Network for Neurodevelopmental Disorders. Richards, C. (PI), Moss, J. (PI), Waite, J. (PI) & Crawford, H. (PI). Cerebra. October 2020 – September 2024.

The impact of Anxiety and Sleep Deprivation on Social Understanding and Social Functioning (ESRC New Investigator Grant – 2021-2023). Surtees A (PI).

### Awards / Prizes:

Christian Guilleminault New Investigator Award, February 2021. International Paediatric Sleep Association and World Sleep Society. Agar, G.

## Recent publications on sleep from the MSG members (by alphabetical order)

### 2022

Agar G, Bissell S, Wilde L, Over N, Williams C, Richards C, Oliver C. Caregivers' experience of sleep management in Smith-Magenis syndrome: a mixed-methods study. *Orphanet J Rare Dis.* 2022;17(1):35.

Qiu J, Morales-Muñoz I. Associations between Sleep and Mental Health in Adolescents: Results from the UK Millennium Cohort Study. *Int J Environ Res Public Health.* 2022; 19(3):1868.

Rakhimov A, Whibley D, Tang NKY. Cognitive-behavioural pathways from pain to poor sleep quality and emotional distress in the general population: The indirect effect of sleep-related anxiety and sleep hygiene. *PLoS One.* 2022; 17(1):e0260614.

Ramduny J, Bastiani M, Huedepohl R, Sotiropoulos SN, Chechlacz M. The association between inadequate sleep and accelerated brain ageing. *Neurobiol Aging.* 2022; 114:1-14.

Selvanathan J, Tang NKY, Peng PWH, Chung F. Sleep and pain: relationship, mechanisms, and managing sleep disturbance in the chronic pain population. *Int Anesthesiol Clin.* 2022; 60(2):27-34.

Turnbull CD, Stockley JA, Madathil S, Huq SSA, Cooper BG, Ali A, Wharton S, Stradling JR, Heitmar R. Effect of obstructive sleep apnoea on retinal microvascular function: a randomised controlled trial. *Graefes Arch Clin Exp Ophthalmol.* 2022; 24:1–11.

Whibley D, Stelfox K, Henry AL, Tang NK, Kratz AL. Development of a hybrid sleep and physical activity improvement intervention for adults with osteoarthritis-related pain and sleep disturbance: a focus group study with potential users. *Br J Pain*. 2022; 16(2):136-148.

## 2021

Agar G, Brown C, Sutherland D, Coulborn S, Oliver C, Richards C. Sleep disorders in rare genetic syndromes: a meta-analysis of prevalence and profile. *Mol Autism*. 2021 Feb; 12(1):18.

Bissell S, Liew A, Richards C & Surtees A (2021). Sleep problems and developmental delay. In: Gozal D, Kheirandish-Gozal L, editors. *Pediatric sleep medicine: mechanisms and comprehensive guide to clinical evaluation and management*. Cham: Springer International Publishing. 667–80.

Black JK, Whittaker AC, Tahrani AA, Balanos GM. The implementation of a physical activity intervention in adults with Obstructive Sleep Apnoea over the age of 50 years: a feasibility uncontrolled clinical trial. *BMC Sports Sci Med Rehabil*. 2020; 12:46.

Clarke L, Chisholm K, Cappuccio FP, Tang NKY, Miller MA, Elahi F, Thompson AD. Sleep disturbances and the At Risk Mental State: A systematic review and meta-analysis. *Schizophr Res*. 2021; 227:81-91.

Facer-Childs ER, de Campos BM, Middleton B, Skene DJ, Bagshaw AP. Temporal organisation of the brain's intrinsic motor network: The relationship with circadian phenotype and motor performance. *Neuroimage*. 2021; 232:117840.

Herrero Babiloni A, Beetz G, Tang NKY, Heinzer R, Nijs J, Martel MO, Lavigne GJ. Towards the endotyping of the sleep-pain interaction: a topical review on multitarget strategies based on phenotypic vulnerabilities and putative pathways. *Pain*. 2021; 162(5):1281-1288.

Lemola S, Gkiouleka A, Read B, Realo A, Walasek L, Tang NKY, Elliott MT. Can a 'rewards-for-exercise app' increase physical activity, subjective well-being and sleep quality? An open-label single-arm trial among university staff with low to moderate physical activity levels. *BMC Public Health*. 2021; 21(1):782.

Lenneis A, Das-Friebel A, Singmann H, Teder-Laving M, Lemola S, Wolke D, Tang NKY, von Mühlönen A, Allik J, Realo A. Intraindividual Variability and Temporal Stability of Mid-Sleep on Free and Workdays. *J Biol Rhythms*. 2021; 36(2):169-184.

Morales-Muñoz I, Durdurak BB, Bilgin A, Marwaha S, Winsper C. Understanding the Relationship Between Sleep Problems in Early Childhood and Borderline Personality Disorder: A Narrative Review. *Nat Sci Sleep*. 2021; 13:2175-2202.

Morales-Muñoz I, Kantojärvi K, Uhre VM, Saarenpää-Heikkilä O, Kylliäinen A, Pölkki P, Himanen SL, Karlsson L, Karlsson H, Paavonen EJ, Paunio T. The Effects of Genetic Background for Diurnal Preference on Sleep Development in Early Childhood. *Nat Sci Sleep*. 2021; 13:219-228.

Morales-Muñoz I, Nolvi, S, Mäkelä, T. et al. Sleep during infancy, inhibitory control and working memory in toddlers: findings from the FinnBrain cohort study. *Sleep Science Practice*. 2021; 5:13.

Petzka M, Charest I, Balanos GM, Staresina BP. Does sleep-dependent consolidation favour weak memories? *Cortex*. 2021; 134:65-75.

Tang NKY. Is cognitive-behaviour therapy for insomnia (CBT-I) the new best pain killer? *Sleep Med Rev*. 2021; 60:101536.

Winsor AA, Richards C, Bissell S, Seri S, Liew A, Bagshaw AP. Sleep disruption in children and adolescents with epilepsy: A systematic review and meta-analysis. *Sleep Med Rev*. 2021; 57:101416.

## 2020

Agar G, Oliver C, Trickett J, Licence L, Richards C. Sleep disorders in children with Angelman and Smith-Magenis syndromes: The assessment of potential causes of disrupted settling and night time waking. *Res Dev Disabil*. 2020; 97:103555.

Baglioni C, Tang NKY, Johann AF, Altena E, Bramante A, Riemann D, Palagini L. Insomnia and poor sleep quality during peripartum: a family issue with potential long term consequences on mental health. *J Matern Fetal Neonatal Med.* 2020; 2:1-9.

Das-Friebel A, Lenneis A, Realo A, Sanborn A, Tang NKY, Wolke D, von Mühlennen A, Lemola S. Bedtime social media use, sleep, and affective wellbeing in young adults: an experience sampling study. *J Child Psychol Psychiatry.* 2020; 61(10):1138-1149.

Facer-Childs ER, Middleton B, Bagshaw AP, Skene DJ. Human Circadian Phenotyping and Diurnal Performance Testing in the Real World. *J Vis Exp.* 2020;(158).

Morales-Muñoz I, Broome MR, Marwaha S. Association of Parent-Reported Sleep Problems in Early Childhood With Psychotic and Borderline Personality Disorder Symptoms in Adolescence. *JAMA Psychiatry.* 2020; 77(12):1256-1265.

Morales-Muñoz I, Nolvi S, Virta M, Karlsson H, Paavonen EJ, Karlsson L. The longitudinal associations between temperament and sleep during the first year of life. *Infant Behav Dev.* 2020; 61:101485.

Paavonen EJ, Morales-Muñoz I, Pölkki P, Paunio T, Porkka-Heiskanen T, Kylliäinen A, Partonen T, Saarenpää-Heikkilä O. Development of sleep-wake rhythms during the first year of age. *J Sleep Res.* 2020;29(3): e12918.

Paavonen EJ, Saarenpää-Heikkilä O, Morales-Muñoz I, Virta M, Häkälä N, Pölkki P, Kylliäinen A, Karlsson H, Paunio T, Karlsson L. Normal sleep development in infants: findings from two large birth cohorts. *Sleep Med.* 2020; 69:145-154.

Tang NKY, Moore C, Parsons H, Sandhu HK, Patel S, Ellard DR, Nichols VP, Madan J, Collard VEJ, Sharma U, Underwood M. Implementing a hybrid cognitive-behavioural therapy for pain-related insomnia in primary care: lessons learnt from a mixed-methods feasibility study. *BMJ Open.* 2020; 10(3):e034764.

Trickett J, Oliver C, Heald M, Denyer H, Surtees A, Clarkson E, Gringras P, Richards C. Sleep in children with Smith-Magenis syndrome: a case-control actigraphy study. *Sleep.* 2020; 43(4):zsz260.

## Upcoming Sleep Conferences & Courses

### Conferences

THE 26TH CONGRESS OF THE EUROPEAN SLEEP RESEARCH SOCIETY will be held in Athens, Greece, on 27<sup>th</sup>-30<sup>th</sup> September 2022. The scope of the programme encompasses the whole field of sleep medicine, from basic science to psychiatry, to psychology, to neurology, to pulmonology, to surgical and oral procedures, to technological aspects, to subjects on the relation of sleep to law and regulations. **Important Dates and Deadlines**; 12 April 2022: Submission deadline for abstracts - 10 May 2022: Submission deadline for preliminary satellite symposia programmes - 15 July 2022: Submission deadline for final satellite symposia programmes and advertisements.

THE EUROPEAN RESPIRATORY SOCIETY (ERS) INTERNATIONAL CONGRESS will be held in Barcelona, Spain, on 4<sup>th</sup>-6<sup>th</sup> September 2022. The ERS Congress is the once-a-year occasion when the world's respiratory experts come together, to present and discuss the latest scientific and clinical advances across the entire field of respiratory medicine.

Future annual meetings include the ASSOCIATION FOR RESPIRATORY TECHNOLOGY & PHYSIOLOGY, which will occur in March 2023 and always include a sleep pathway. Indeed this year's conference in May 2022 was well attended and included an excellent debate on the use of using oximetry to diagnoses OSAHS. The BRITISH SLEEP SOCIETY has also just been held in May 2022 in Edinburgh. This meeting tends to run once every 2 years.

### Courses

## [EDINBURGH SLEEP MEDICINE COURSE 2022](#)

This excellent one-week sleep course is aimed at healthcare scientists and physicians who are interested in detecting and treating sleep disorders has just run May 9 - May 13 2022, but usually runs annually.

Other important dates include:

### [CBT-I \(Basic\) Course](#)

**May 14 - May 15** *Hilton Edinburgh Carlton*

### [ISMC 2022](#)

**June 7 - June 10** *Netherlands*

### [Home Mechanical Ventilation \(HMV\) UK Meeting](#)

**July 8** *London*

### [CBT-I Masterclass, University of Oxford](#)

**September 12 - September 13**

Course Information: Two-day, in-person Cognitive-Behavioural Therapy for Insomnia (CBT-I) masterclass aimed at clinical professionals with a licence to practice, including psychologists psychiatrists and physicians, technologists, nurses, allied health professionals and clinical researchers. Led by Professor Colin Espie, Dr Dimitri Gavrilloff, Associate Professor Simon Kyle, Dr Lizzie Hill and Dr Rachel Sharman. Course Code CBT-MC Sept Course Leader Dr Dimitri Gavrilloff Course Description Insomnia is the most commonly experienced problem with sleep, with as much as one in 10 of the adult...

### [CBT-I Masterclass, University of Oxford](#)

**November 7 - November 8**

Two-day, online Cognitive-Behavioural Therapy for Insomnia (CBT-I) masterclass aimed at clinical professionals with a licence to practice, including psychologists, psychiatrists and physicians, technologists, nurses, allied health professionals and clinical researchers. Led by Professor Colin Espie, Dr Dimitri Gavrilloff, Associate Professor Simon Kyle, Dr Lizzie Hill and Dr Rachel Sharman. Course Code CBT-I MC Autumn Course Leader Dr Dimitri Gavrilloff Course Description Insomnia is the most commonly experienced problem with sleep, with as much as one in 10 of the adult...

## **New standards for sleep studies from the European Respiratory Society Task Force**

The ERS standards for the measurement of sleep disordered breathing are about to be accepted for final consultation before publication in the ERJ later in the year. This epic piece of work will produce better technical standards based on current evidence and will provide the UK and Europe with more agreeable definitions than the constantly changing (and expensive) AASM standards.

European Respiratory Society statement on technical standards for the scoring of respiratory events using Type III devices for the diagnosis of sleep disordered breathing in adults and children

Renata L. Riha<sup>1</sup>, Marta Celmina<sup>2</sup>, Brendan Cooper<sup>3</sup>, Refika Hamutcu-Ersu<sup>4</sup>, Athanasios Kaditis<sup>5</sup>, Andrew Morley<sup>6</sup>, Athanasia Pataka<sup>7</sup>, Thomas Penzel<sup>8</sup>, Luca Roberti<sup>9</sup>, Warren Ruehland<sup>10</sup>, Dries Testelmans<sup>11</sup>, Annelies van Eyck<sup>12</sup>, Gert Grundström<sup>13</sup>, Johan Verbraecken<sup>14</sup>, Winfried Randerath<sup>15</sup>

## **Covid-19 and sleep update**

The effect of the Covid19 pandemic on clinical and sleep work has been very challenging. Midlands in-patient sleep laboratories were closed across the UK from Spring 2020 until Autumn 2022 and clinical services were reduced to “click and collect” home studies only.

The UHB polysomnography service was closed at Heartlands Hospital for the pandemic, but on re-opening has a new venue, (Circle Hospital, Pebble Mill, Birmingham) and new equipment (S-Med). The PSG services at The Barberry, University of Birmingham and other private practices were also closed. This has disrupted some sleep research projects, but things are rapidly improving in late spring/early summer 2022.

Most services were able to adopt novel delivery to services including “click and collect” home sleep studies from hospital car parks, new Type III sleep study devices (e.g. WatchPAT) and the use of remote monitoring for CPAP machines. This allowed minimal patient footfall in hospitals be most patients to get some support throughout the pandemic.

Just as the pandemic measures began to relax, the “double whammy” of the Philips CPAP debacle and a world shortage of CPAP machines/manufacture has hit studies across the world. This is expected to be problematical for anywhere between 1-3 years according to different industry sources.