A. Basic Sleep Science Poster Presentations

(occurrence [11–16 Hz] and slow [11–13 Hz] and fast [13–16 Hz] spindle density p/min) and REM theta power (4.5–8 Hz).

**Results:** Repeated measures ANCOVA, controlling for age, indicated greater memory scores in Controls compared to MCI on the episodic task, F=6.7 (p=.01), and no group differences in the visuospatial task (F=1.8, p=.17). In Controls, greater delta power was associated with increased episodic memory retention (r=.515, p=.006). In the MCI group, episodic memory was associated with fast spindle density (r=-.352, p=.04), and visuospatial memory was also associated with fast spindle density (r=-.385, p=.01) and spindle occurrence (r=-.479, p=.003).

**Conclusion:** Sleep spindles appear to be negatively associated with memory retention, specifically in MCI. However, given the heterogeneity of MCI, further analysis of its cognitive subtypes is warranted. Comprehensive cognitive and neural pathophysiology profiling are required to better delineate the function of spindles in ageing.

### P052

# MENTAL HEALTH PREDICTORS FOR SHIFT WORK DISORDER IN PARAMEDICS DURING THEIR EARLY CARFER

<u>Harris R<sup>1</sup></u>, Drummond S<sup>1</sup>, Meadley  $B^{2,3,4}$ , Rajaratnam S<sup>1,2</sup>, Williams  $B^{2,3}$ , Smith  $K^{2,3,4,5}$ , Bowles  $K^{2,3}$ , Nguyen  $E^{1}$ , Dobbie  $M^{4}$ , Wolkow  $A^{1,2}$ 

<sup>1</sup>Turner Institute for Brain and Mental Health, Monash University, Clayton, Australia, <sup>2</sup>Paramedic Health and Wellbeing Research Unit, Monash University, Frankston, Australia, <sup>3</sup>Department of Paramedicine, Monash University, Frankston, Australia, <sup>4</sup>Ambulance Victoria, Doncaster, Australia, <sup>5</sup>Department of Public Health and Preventive Medicine, Monash University, Melbourne, Australia

**Introduction:** Shift work disorder (SWD) involves excessive sleepiness and/or insomnia and is associated with poor health outcomes in those affected. This study assessed the prevalence of and risk factors for SWD during the first six-months of paramedics' careers. Furthermore, the study explored potential mediators in the relationship between mental health and SWD risk.

Methods: Recruit paramedics' (n=101) SWD risk (SWD-Screening Questionnaire) was assessed at baseline (i.e., before shift work) and at six-months after engaging in shift work as a graduate paramedic. Logistic regression models assessed whether baseline depression (Patient Health Questionnaire-9) and baseline anxiety (Generalised Anxiety Disorder Questionnaire-7) predicted a high risk for SWD at six-months. Lavaan path analysis was used to assess whether shift and sleep variables, created from participants' sleep and work diaries, mediated the relationship between mental health and SWD risk.

Results: After six-months of emergency work 21.5% of paramedics were high risk for SWD. Baseline depression predicted 1.28-times greater odds for SWD at six-months. Shift and sleep variables were not mediators in the relationship between baseline mental health and subsequent SWD risk. Baseline depression was independently associated with increased sleepiness levels following paramedics' major sleep periods across all work conditions (nightshift, workdays, and non-workdays) at six-months. Depression levels before shift work also predicted a greater perceived workload on nightshifts.

**Conclusions:** Depression symptoms before starting shift work are a modifiable risk factor for SWD. Moreover, the first six-months of paramedics' careers is a critical period for implementing

preventative measures for SWD, including interventions to decrease depression symptoms.

#### P053

# MANAGEMENT OF INSOMNIA BY AUSTRALIAN PSYCHOLOGISTS

Haycock J<sup>1,4</sup>, Hoon E<sup>2,4</sup>, Sweetman A<sup>1,4</sup>, Lack L<sup>3,4</sup>, Lovato N<sup>1,4</sup>

<sup>1</sup>Adelaide Institute for Sleep Health, College of Medicine and Public Health, Flinders University, Bedford Park, Australia, <sup>2</sup>Discipline of General Practice, Faculty of Health and Medical Sciences, University of Adelaide, Adelaide, Australia, <sup>3</sup>College of Education Psychology and Social Work, Flinders University, Bedford Park, Australia, <sup>4</sup>National Centre for Sleep Health Services Research, Flinders University, Adelaide, Australia

Introduction: Insomnia is the most common sleep disorder, 10–30% of adults have regular difficulties falling and/or staying asleep that cause significant daytime impairments. General Practitioner (GP) clinical guidelines recommend Cognitive Behavioural Therapy for insomnia (CBTi) as the first-line treatment rather than medications. However, most GPs do not have the time or training to administer CBTi, and consequently, many patients are prescribed sedative-hypnotic medicines. Psychologists have training in CBT and may be well placed to deliver behavioural therapy for insomnia. However, the amount of sleep-specific training, and knowledge of CBTi among Australian psychologists remains unknown. Identifying key barriers and enablers in the management of insomnia within psychology provides a first step in engaging with psychologists about the delivery of evidence-based insomnia treatment.

**Methods:** This qualitative study used a pragmatic inductive approach. Semi-structured interviews were conducted with 26 Australian psychologists. Interviews included case study scenarios to provide an in-depth exploration of psychologists' knowledge and skills in the management of insomnia, and attitudes towards further training in CBTi. Interview transcripts were analysed using thematic analysis to identify themes.

**Results:** Preliminary themes identified in the data include; psychologists believe sleep is important for general well-being, insomnia is usually seen as secondary to other co-morbid disorders such as depression and anxiety that are the focus of treatment, most psychologists surveyed lack training and knowledge in CBTi.

**Discussion:** Most Australian psychologists are not well prepared to manage insomnia effectively with CBTi. Along with other primary health care professionals, psychologists need training in the management of insomnia.

## P054

THE EFFECT OF HEAD UP BED-TILT (HUT) ON SLEEP DISORDERED BREATHING (SDB) IN PATIENTS WITH SUPINE DOMINANT SLEEP APNOEA (SDOSA): AN EXPLORATORY STUDY.

Horadagoda  $C^{1,2}$ , Kairaitis  $K^{1,2,3}$ , Amis  $T^{1,2}$ 

<sup>1</sup>Westmead Institute of Medical Research, Westmead, Australia, <sup>2</sup>University of Sydney, Sydney, Australia, <sup>3</sup>Department of Respiratory and Sleep Medicine, Westmead Hospital, Westmead, Australia

SDB severity is reduced in SDOSA when posture changes from supine to lateral. Sleeping with a head up bed-tilt(HUT) is known to reduce SDB in some OSA patients. In this exploratory study, we tested whether HUT could be used to reduce SDB in SDOSA