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0009

INTERINDIVIDUAL VARIATION AND EXTENDED WAKEFULNESS IN SLEEPINESS AFTER ACUTE AND CHRONIC SLEEP DEPRIVATION

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0**Introduction:** Sleepiness is a behavioural consequence of sleep pressure and is associated with negative outcomes with interindividual variation, possibly related to central sleep mechanisms. However, there is a lack of evidence linking progressive sleep need and sleepiness with factors of individual variability, which could be tested by total acute and chronic sleep deprivation. Thus, the objective of the study was to investigate the development of sleepiness in sleep deprived mice.
Methods: Male C57BL/6J mice were distributed in sleep deprivation, sleep rebound and control groups. Animals underwent acute sleep deprivation for 3, 6, 9 or 12 hours or chronic sleep deprivation for 6 hours for 5 consecutive days. Sleep rebound groups had a sleep opportunity for 1, 2, 3, or 4 hours after acute sleep deprivation or 24 hours after chronic sleep deprivation. During the protocols, sleep attempts were counted to calculate a sleepiness index. After euthanasia, blood was collected for corticosterone assessment.
Results: Using the average of group sleep attempts, it was possible to differentiate between sleepy (mean>group average) and resistant animals (mean<group average). Resistant mice were more frequent in all settings. Individual variation accounted for 52% of sleepiness variance during chronic sleep deprivation and extended wakefulness explained 68% of sleepiness variance during acute sleep deprivation. A normal corticosterone peak was observed at the start of the dark phase, independent of sleep deprivation.
Conclusion: Different profiles of sleepiness emerged in sleep deprived mice. Sleep deprivation was the main factor for sleepiness during acute sleep deprivation whereas in chronic deprivation individual variation was more relevant.
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BED SHARING VERSUS SLEEPING ALONE ASSOCIATED WITH SLEEP HEALTH AND MENTAL HEALTH

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Introduction: Although many adults do not sleep alone, associations between bed-sharing and sleep parameters in community samples are not well-known. The present study explored whether sharing a bed was associated with sleep duration and quality and mental health factors.
Methods: Data was obtained as part of the Sleep and Health Activity, Diet, Environment, and Socialization (SHADES) study of N=1,007 working-age adults from southeastern Pennsylvania. Bed Sharing was assessed with survey items assessing frequency in the past month of sharing a bed with a partner/spouse, child/children, pet(s), other family member(s), or nobody (sleeping alone). Other sleep health factors assessed included Insomnia Severity Index, Brief Index of Sleep Control, Epworth Sleepiness Scale, Fatigue Severity Scale, STOP-BANG apnea score, sleep duration, sleep latency, and wake after sleep onset. Mental health factors included PHQ9 depression score, GAD7 anxiety score, Multidimensional Scale of Perceived Social Support, Perceived Stress Scale, and global ratings for overall life satisfaction and relationship satisfaction. Covariates included age, sex, race/ethnicity, income, and education.
Results: Compared to those who reported "Never," those who shared a bed with a partner "Most nights" reported less insomnia severity (B=-1.60; 95%CI[-2.55,-0.66]; p=0.001), more sleep (B=0.25; 95%CI[0.02,0.48]; p=0.035), less fatigue (B=-2.24; 95%CI[-4.10,-0.39]; p=0.018), less sleep apnea risk (B=-0.25; 95%CI[-0.42,-0.09]; p=0.003), shorter sleep latency (B=-6.32; 95%CI[-11.15,-1.50]; p=0.010) and less WASO (B=-8.69; 95%CI[-15.85,-1.52]; p=0.018). Those who slept with their child "Most nights" reported greater insomnia severity (B=2.14; 95%CI[0.65,3.62; p=0.005), less control over sleep (B=-0.37; 95%CI[-0.59,-0.15]; p=0.001), and greater sleep apnea risk (B=0.33; 95%CI[0.07,0.59]; p=0.012). Those who slept with other family members reported more apnea risk (B=0.44; 95%CI[0.07,0.82]; p=0.021). Those who slept alone reported greater insomnia severity (B=2.28; 95%CI[1.28,3.28]; p<0.0001), more sleepiness (B=0.98; 95%CI[0.22,1.74]; p=0.011), more fatigue (B=2.87; 95%CI[0.89,4.84]; p=0.005), and greater apnea risk (B=0.24; 95%CI[0.06,0.41]; p=0.007). In addition, sleeping with a partner was associated with lower depression, anxiety, and stress scores, and greater social support and satisfaction with life and relationships. Sleeping with children was associated with more stress. Sleeping alone was associated with higher depression scores, and lower social support and life and relationship satisfaction.
Conclusion: Sleeping with a partner/spouse is associated with better sleep quality and mental health overall. Sleeping with a child, on the other hand, was associated with worse sleep in general.
Support (If Any):

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WORK HARD, SLEEP HARD: VIGOROUS WORKDAYS AND SLEEP DIFFICULTIES

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Introduction: It is common in America to work 5 or 6 days as a full work week. This is exhausting, especially for those with a vocation that requires vigorous physical activity during the work day. Sleep is an important factor when assessing workplace efficiency, as those able to obtain regular healthy sleep will perform better.
Methods: A multinomial logistical regression analysis was conducted on the 2017 - March 2020 data collected from the National Health and Nutrition Examination Survey (NHANES) to explore a relationship between those with self-assessed sleep difficulties and the number of days of vigorous physical activity during work. The specific question used for analysis was, "Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like carrying or lifting heavy loads, digging or construction work for at least 10 minutes continuously?" If yes, the