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risk factor for obesity in this population. Though sleep duration has been extensively researched in regard to weight outcomes in midlife women, sleep timing is a relatively novel aspect of sleep linked to obesity. However, it is unclear how sleep timing may contribute to weight outcomes in this population. The current study explored the connection between sleep timing and weight, considering sleep duration as a potential mediator in this association.

Methods: The study is an archival analysis of data from the Midlife in the United States-II study (MIDUS-II), Project 4. The sample consisted of 126 women between the ages of 40 to 64 (*M* = 52.90, *SD* = 6.94). Measures included actigraphy (i.e., sleep duration, mean sleep timing) and an objective assessment of obesity (i.e., BMI, waist circumference). A mediation model using Hayes' SPSS PROCESS macro was used to assess study aims.

Results: After controlling for selected covariates, sleep timing was not directly associated with BMI (95% CI [-.0106, .0110]) or waist circumference (95% CI [-.0229, .0349]). However, sleep duration was a significant mediator of sleep timing and BMI (95% CI [.0001, .0123]), and sleep timing and waist circumference (95% CI [.0007, .0378]).

Conclusion: Sleep timing was indirectly associated with weight outcomes in the current sample. Specifically, late sleep timing was associated with decreases in sleep duration, which influenced obesity. Delayed sleep timing, therefore, has implications for weight outcomes in this population via sleep duration. This finding highlights the importance of understanding how sleep behavior impacts weight in midlife women. Although sleep timing alone may not impact weight, findings can inform clinical recommendations regarding preventative and interventional approaches to weight management in this population.

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0816

GENDER DIFFERENCES IN OBSTRUCTIVE SLEEP APNEA (OSA) IN PRE-DIABETIC PATIENTS

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Introduction: Little is known about gender differences in OSA rates among pre-diabetic patient populations. The purpose of this study was to determine if there was a clinical difference in OSA rates between males and females who had pre-diabetes in a community medical practice.

Methods: This study consisted of a total of 65 pre-diabetic patients. According to the American Diabetes Association, pre-diabetes is defined as anyone who has a mean HA1c between 5.7%-6.4%. Patients underwent polysomnography to determine the severity of their OSA. OSA was defined as: mild, moderate or severe based on the Apnea Hypopnea Index (AHI). Mild was classified as AHI of greater than 5 but less than 30 apneas per hour. Moderate was greater than 15 but less than 30 apneas per hour. Severe was defined as over 30 apneas. Males and females were split into two groups where the mean levels of AHI and HA1c were examined based on their respective categories of severity. AHI severity was determined based on two HA1c categories of 5.4 - 6.0 and 6.1 - 6.4. Unpaired t-tests were used to determine significance levels.

Results: The percent of females in this study was 57%. The average age of the entire sample was 51 years. The mean HA1c and AHI for males was 5.99 and 33.79 respectively. The mean HA1c and AHI for females was 5.91 and 29.98 respectively (difference of AHI in males v. females=4; p=0.52). Among males, there was a difference of 7 points in AHI between the 5.4–6.0 and 6.1–6.4 HA1c categories (AHI of 31.27 vs. 38.35 respectively). Among females there was an AHI difference of 5 points between the two HA1c categories (AHI of 28.69 vs. 33.49 respectively). The large difference in AHI points between males and females was observed in the 6.1- 6.4 HA1c category (difference=5; p=0.59).

Conclusion: There were clinically important differences in OSA between males and females across the entire sample and among different HA1c severity categories. Larger samples sizes will be needed in future studies to confirm and validate the significance of these findings.

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0817

ADHERENCE TO CPAP TREATMENT IN WOMEN WITH OBSTRUCTIVE SLEEP APNEA

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Introduction: Family physicians are under-referring patients with obstructive sleep apnea (OSA) to sleep medicine specialists for diagnosis and treatment, a phenomenon particularly acute in women. Because recruited women have been found to have a surprisingly high OSA diagnosis rate of substantial severity, the present study examines predictors of continuous positive airway treatment (CPAP) adherence in an exclusively female sample - a group rarely selected for evaluation. The objectives were to describe the factors associated with CPAP non-adherence and to examine predictors of treatment adherence.

Methods: Participants were 29 women (mean age = 56.5, sd = 9.8), recruited from two hospital based family medicine clinics. OSA was diagnosed by polysomnography; insomnia-related variables, quality of life and psychological adjustment were assessed by self-report measures.

Results: There were no significant differences between adherent and non-adherent women with respect to severity of OSA. The adherent group had worse nocturnal and daytime functioning than the non-adherent group; this difference reached statistical significance for feeling unrefreshed in the morning, perceived poor sleep quality, feeling sleepy during the day and having difficulty concentrating.. The two most important adherence predictors were: feeling refreshed in the morning and number of nocturnal awakenings.

Conclusion: Our findings suggest that women with moderate to severe OSA may be identified first by complaints related to feeling unrefreshed in the morning, followed by perceived poor sleep quality, sleepiness during the day and difficulty concentrating. These, also, are the women are most likely to accept and adhere to CPAP treatment. Since adherence predictors were basically sleep quality variables, one might speculate that identified CPAP adherent women in family practice settings may be at risk for having their sleep apnea misdiagnosed as insomnia and subsequently be offered inappropriate treatment (e.g. sedatives or hypnotics). Notably, the non adherent women had equally severe OSA, and these are the women, at elevated risk of having their OSA overlooked by their physician.

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