Under-reporting of Sleep Symptoms Among U.S. Adults at High Risk for Obstructive Sleep Apnea

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Background

- Obstructive sleep apnea (OSA) affects an estimated 17% of women and 34% of men in the United States; obesity and cardiometabolic disease are important risk factors and comorbidities.[1]
- Patients may not report sleep problems voluntarily; asking about snoring and nocturnal breathing pauses may improve recognition of OSA risk.[1]
- OSA and depression share symptoms such as fatigue, disturbed sleep, and impaired concentration, which may influence symptom reporting and complicate clinical recognition.[2,3]

Objective

- To estimate the prevalence of never reporting sleep trouble to a clinician among U.S. adults at high risk for OSA and identify associated factors.

Methods

- Data source: National Health and Nutrition Examination Survey (NHANES) 2017–March 2020 pre-pandemic cycle[4]
- Population: Adults aged ≥18 years with obesity (BMI ≥30 kg/m²)
- High OSA risk: BMI ≥30 kg/m² plus both frequent snoring and frequent snorting, gasping, or apneic events during sleep (≥3 nights/week)
- Outcome: Under-reporting, defined as never having told a health-care provider about trouble sleeping
- Depressive symptoms: PHQ-9 score ≥10, indicating moderate or greater depressive symptom severity.
- Analysis: Survey-weighted logistic regression adjusting for age, sex, race/ethnicity, BMI category, depressive symptoms, hypertension, and diabetes

Study Cohort

- n = 507 complete-case participants meeting high-risk criteria
- 56.7% BMI ≥35 kg/m²
- 59.1% male
- 61.7% non-Hispanic White
- 17.4% PHQ-9 ≥10
- 55.2% hypertension
- 21.1% diabetes

Results

43.6% of adults at high risk for OSA had not discussed sleep trouble with a clinician.

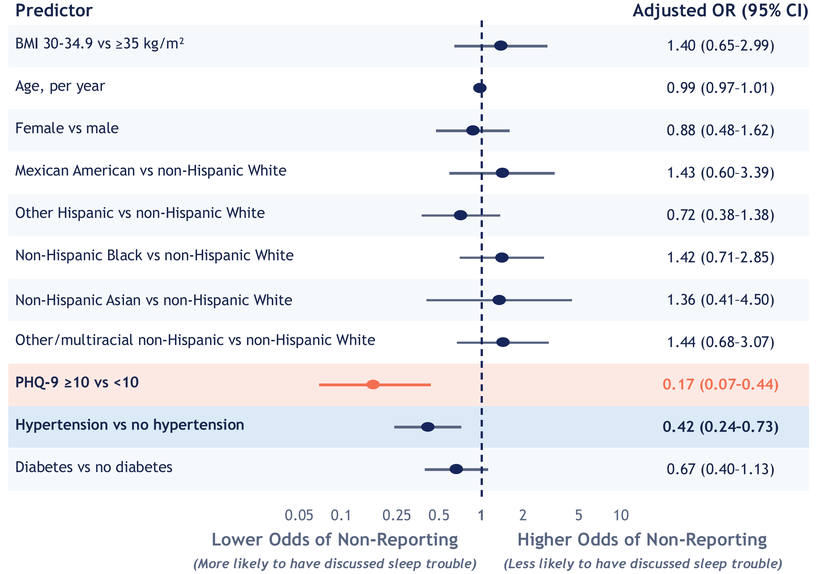
Factors Associated With Clinical Discussion of Sleep Trouble

Moderate-to-severe depressive symptoms (PHQ-9 ≥10)
aOR 0.17 (95% CI, 0.07—0.44)

Hypertension
aOR 0.42 (95% CI, 0.24—0.73)

Adults with moderate-to-severe depressive symptoms or hypertension were more likely to have discussed trouble sleeping with a health-care provider.

Adjusted associations with under-reporting sleep trouble



Reference groups: BMI ≥35 kg/m², male sex, non-Hispanic White, PHQ-9 <10, no hypertension, and no diabetes. Model adjusted for all displayed variables.

Conclusion

- More than 2 in 5 adults with obesity and both frequent nocturnal respiratory symptoms, at high risk for OSA, had never discussed sleep trouble with a clinician.
- Adults with moderate-to-severe depressive symptoms or hypertension were more likely to have discussed sleep trouble.
- These associations may reflect differences in symptom burden, health-care contact, or opportunities for clinical discussion and do not establish causal effects.
- Adults without moderate-to-severe depressive symptoms may be less likely to discuss sleep trouble, supporting systematic sleep-symptom assessment in all adults at high risk for OSA.

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