



Heart Disease and Risks of Sleep Apnea in a Caribbean Sample

Fernandez, S.¹, Jean-Louis, G.^{1,2,3}, Zizi, F.^{1,2,3}, von Gizycki, H.⁴, Dharawat, A¹, Lazar, JM¹, Brown, CD¹

Brooklyn Center for Health Disparities, Department of Medicine, SUNY Downstate Medical Center, NY¹;
 Sleep Disorders Center, Department of Neurology, SUNY Downstate Medical Center, NY²;
 Brooklyn Research Foundation on Minority Health, Kingsbrook Jewish Medical Center, NY³;
 Department of Scientific Computing, SUNY Downstate Medical Center, NY⁴



Introduction

Few studies have investigated associations between physical health measures and obstructive sleep apnea (OSA) among Blacks. Using a community-based sample of Caribbean Americans, we examined which health risk factors could discriminate between individuals at risk for OSA.

Methods

A total of 554 patients (mean age: 48.17 ± 16.75 years) participated in the study; 55% were women. Data were collected in four primary-care clinics in Brooklyn, NY. Eligible patients completed questionnaires that were available in both English and Haitian Creole. A health educator explained the purpose of the study to interested patients and assisted consenting participants in completing questionnaires. Participants reporting habitual snoring, excessive daytime sleepiness, and sleep fragmentation were considered at high OSA risk. All data were entered in SPSS 15.0 for statistical analysis.

Results

The rate of OSA symptoms was: snoring (45%), excessive daytime sleepiness (33%), and difficulty maintaining sleep (34%). Many reported falling asleep while watching television (47%) or while driving (14%). The average patient had a BMI of 29.15 ± 7.16 kg/m². Of the sample, 35% reported a history of hypertension, 16% a history of heart problems, and 13% were at high risk for OSA.

Differences in Insomnia-Related Complaints between Respondents at High OSA Risk and Respondents at Low OSA Risk

Variable	OSA Risk (Low)	OSA Risk (High)	χ ²
Difficulty Initiating Sleep	32%	49%	8*
Early Morning Awakening	41%	66%	15**
Daytime Napping	32%	54%	12**
Sleep Medication	10%	13%	1

Differences in insomnia-related complaints were assessed using Fisher's Exact tests; *P < 0.01, **P < 0.001.

Fewer individuals at low OSA risk reported insomnia complaints (17% vs. 35%, χ² = 12.35, p < 0.001). Logistic regression analysis showed that a history of heart disease was the most important predictor of the likelihood of expressing OSA symptoms, with a corresponding multivariate-adjusted odds ratio of 11 (95% CI = 3.03 - 40.63).

Associations of Demographic, Medical, and Daytime Functioning to OSA Risk			
Variable	Wald	OR	CI
Age	.76	.76	.94 - 1.02
Sex	2.36	2.36	.80 - 6.35
BMI	.51	.51	.96 - 1.09
History of Heart Disease	11.22	11.22**	2.52 - 34.34
History of Hypertension	4.03	4.03*	.08 - .97
Health Satisfaction	1.18	1.18	.40 - 1.30
Sleep Satisfaction	3.95	3.95*	1.01 - 8.55
Ability to Concentrate	3.67	3.67*	.97 - 8.76
Sleepy While Driving	.73	.73	.10 - 2.41
Fall Asleep Watching TV	5.42	5.42*	1.22 - 10.21

Conclusions

These findings are consistent with previous studies showing associations between heart disease and OSA among white and African-American persons. Caribbean patients with a history of heart disease should be a prime target for interventions that promote adequate screening and timely diagnosis of sleep apnea. Future studies should assess sleep patterns of Caribbean Americans using epidemiologic methodology.

References

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