



Excessive Daytime Sleepiness and Adherence to Antihypertensive Medications: Analysis of the CAATCH Data

Turner A.¹, Jean-Louis G.¹⁻³, Zizi F.¹⁻³, Von Gizicky H.¹, Brown C.¹, Boutin-Foster C.⁴, Fernandez S.⁵, Ogedegbe G.⁵

Brooklyn Health Disparities Center, Department of Medicine, SUNY Downstate Medical Center, NY¹;
Department of Neurology, Seep Disorders Center, SUNY Downstate Medical Center, NY²
Brooklyn Research Foundation on Minority Health, Kingsbrook Jewish Medical Center, NY³;
Center for Complementary and Integrative Medicine, Weill Cornell Medical College, NY⁴;
Center for Healthful Behavior Change, Division of Internal Medicine, NYU Medical Center, NY⁵



Introduction

Twenty percent of adults in the US population experience excessive daytime sleepiness (EDS). EDS often occurs as a result of insufficient sleep, sleep apnea, illicit substance use, or medical and psychiatric conditions.

This study ascertained associations between excessive daytime sleepiness and adherence to hypertensive medication among inner-city blacks.

Methods

One thousand and fifty nine hypertensive blacks (average age: 57±12 years) participated in the Counseling African-Americans to Control Hypertension (CAATCH) trial. Details of the study design and methodology have been published previously (Circulation 2009;2:249-256).

Data analyzed in this study included baseline socio-demographic, medical history, EDS, and medication adherence (MA). Sleepiness was measured with the Epworth Sleepiness Scale, using a cut-off score of ≥ 10 to define EDS.

MA was measured with an abbreviated Morisky scale, with a score > 0 indicating non-adherence.

All participants provided informed consent under the supervision of the IRB at New York University Medical Center. Data analysis was performed using SPSS 15.0.

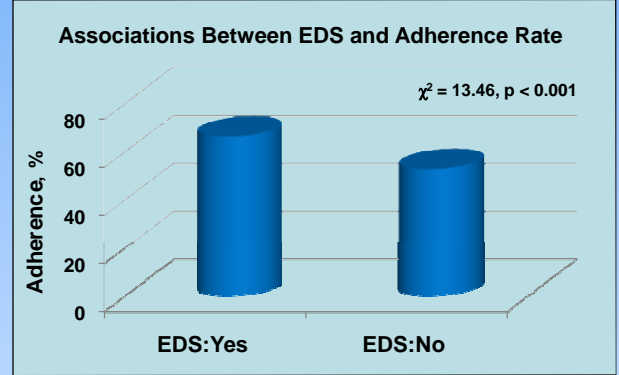
Results

Of the sample, 71% were female, 72% received at least a high school education, 51% reported a history of smoking and 33% had a history of alcohol consumption. Overall, 27% of the participants exhibited EDS, while 44% were classified as adherent to prescribed antihypertensive medications.

Clinical Characteristics	
Variable	Mean ± SD
Systolic PB	144 ± 29
Diastolic PB	86 ± 19
Cholesterol	194 ± 32
Triglyceride	122 ± 71
Glucose	113 ± 48

Multivariate logistic regression analysis was used to assess association between EDS and MA, adjusting for effects of age, sex, education, and smoking and drinking history.

Results indicated that participants who exhibited excessive daytime sleepiness were nearly twice as likely to be non-adherent to recommended treatment (OR = 1.85, 95% CI = 1.31-2.59, p < 0.0001).



Conclusions

Analysis of the CAATCH data showed a high prevalence of EDS among hypertensive blacks. EDS is a significant predictor of the likelihood of adhering to prescribed medications for hypertension.