Paper Session E4: Sleep: Focus on Special Populations

Sleep Quality, Mental Acuity, Physical Energy, and Mood in Adults with Obstructive Sleep Apnea

Eileen R. Chasens, DSN, RN, University of Pittsburgh, Pittsburgh, PA ~ Michelle Maramag, NS, University of Pittsburgh, Pittsburgh, PA ~ Susan Sereika, PhD, University of Pittsburgh, Pittsburgh, PA ~ Patrick Strollo , MD, University of Pittsburgh, Pittsburgh, PA

Purpose: This study examined the association between sleep quality, physical and mental energy, and mood.

Framework: Granger's theory suggests that impaired sleep is associated with decreased functional outcomes.

Methods: The study had a cross-sectional observational design. Subjects (n=37) being evaluated for suspected OSA were recruited from a sleep clinic. OSA severity (measured by apnea + hypopnea index [AHI]) was determined by an overnight sleep study. The Pittsburgh Sleep Quality Index (PSQI) was used to determine subjective sleep quality. Mental energy (ME) and physical energy (PE) were determined from 100mm visual analog scales from a 7-day Sleep/Activity Diary. Anchors for ME were mentally "sluggish" to "alert" and for PE were "exhausted" to "energetic". The Profiles of Mood States (POMS) was used to examine mood disturbances. Data was analyzed with SPSS Version 15 software with descriptive and nonparametric inferential statistics.

Results: The sample was equally distributed by gender (51% male), middle-aged (mean age= 49.51 + 11.45 years), White (78%), and overweight or obese (mean BMI= 33.98 + 7.35). The majority (75%) had an AHI > 5; 25% of the sample had an AHI > 30. The majority of subjects (88%) reported poor sleep quality with PSQI scores >5. Increased PSQI scores were associated with decreased mood (rho=.58, p=.002), decreased ME (rho=-.57, p=.003) and decreased PE (r=-59, p=.002). Mood disturbance was strongly associated with low PE (rho=-72, p=.001) and low ME (rho=-38, p=.024). PE and ME were significantly correlated with each other (rho=.51, p=.001). A stepwise regression to predict mood disturbance found poor sleep quality and decreased PE added significantly to the model (p<.05); ME approached significance. (p=.078), AHI was not statistically significant.

Conclusions: In this sample of adults profoundly affected by sleep apnea, impaired sleep quality and the subjective appraisal of being physically and mentally exhausted were associated with decreased psychological mood.