TACSM Abstract

Accessing Sleep, Sedentary Behaviors, and Physical Activity among College students: The Roles of Ethnicity and Obesity

ANGELA CORIDDI, XIAOXIA ZHANG, SAMANTHA MOSS, & XIANGLI GU

The Movement and Physical Activity Epidemiology Laboratory; Department of Kinesiology; The University of Texas at Arlington; Arlington, TX

Category: Undergraduate

Advisor / Mentor: Gu, Xiangli (Xiangli.Gu@uta.edu)

ABSTRACT

Physical inactivity/sedentary behavior and sleep disorder have been identified as emerging public health problems. Only half of on-campus college students report meeting recommended moderate-to-vigorous physical activity (MVPA) and over 60% of US adults between the ages of 20–39 years were either overweight or obese. **PURPOSE:** The purposes of this study were to: 1) identify the relationships between physical activity (light PA [LPA], MVPA), sedentary behavior, and sleep patterns among college students; and 2) examine the effects of the ethnicity (Hispanic vs. non-Hispanic) and obesity (normal weight vs. overweight/obese) on study variables. **METHODS**: There were 139 college students participated in the study (89 non-Hispanics; 96 females; M_{age} = 22.2 ± 3.71). Among them, 56% were normal weight and 44% were overweight/obese (BMI ≥ 25). The accelerometer (ActiGraph GT9X) was used to assess sleep patterns (i.e., sleep efficiency, number of awakenings, and awakening length), LPA, MVPA, and sedentary behavior. Data was analyzed using descriptive analysis, Pearson correlation analysis, and a 2 (Hispanic vs. non-Hispanic) x 2 (normal weight vs. overweight/obese) multivariate analysis of covariance (MANCOVA) by controlling for gender. **RESULTS**: College students experienced fair sleep efficiency (M = 86.42) but more sleep disturbances with an average of 24 awakenings per night lasting 2.77 minutes per time. College students spent 55.2%, 16.2%, and 28.6%% of their time in LPA, MVPA, and sedentary behavior, respectively. Only MVPA was positively associated with sleep patterns (awakening length; r = 0.19, $p < 0.05$), but not with LPA and sedentary behavior. The MANCOVA resulted no statistically significant group differences among study variables ($p > .05$). It was noticed that Hispanic students had less sleep efficiency (d = .23) and more awakenings (d = .33) than non-Hispanic peers. Hispanic children also showed slightly more MVPA (d = .06) and spent more time being sedentary (d = 0.09) than non-Hispanic peers. Compared to normal-weight peers, overweight/obese college students had lower sleep efficiency (d = .18) and spent more time on MVPA (d = .05) and sedentary behavior (d = 0.22). **CONCLUSION**: The findings indicate that MVPA during weekdays might have negative effects on sleep quality among this population regardless of their sedentary behavior. The study provides a unique perspective of factors (i.e., ethnicity and obesity) associated with movement behaviors among college students which allow for targeted interventions to improve the health of young adults.