



Mid Atlantic Regional Chapter of the American College of Sports Medicine

Annual Scientific Meeting, November 5th - 6th, 2021
Conference Proceedings
International Journal of Exercise Science, Issue 9, Volume 10



The Relationship Between Sleep Quality and Quantity and Body Composition in a College Population

Juliana M. Schraer, Emily J. Sauer, FACSM. East Stroudsburg University, East Stroudsburg, PA

The amount of sleep and the quality of that sleep can distress countless physiological components of the body. A deficiency in these two sleep dynamics may lead to a higher body composition. Specifically, due to the change of lifestyle of a typical college student would lead more into the assumption that sleep would affect their body composition. **PURPOSE:** This study aimed to analyze the relationship of sleep quality and quantity with the corresponding body composition parameters and resting metabolic rate (RMR) in a non-athletic college population. **METHODS:** Study participants included 27 East Stroudsburg University students aged 18-25 years (11 males and 16 females). Subjects were undergraduate/graduate students and non-NCAA athletes. Subjects were 8-10 hours fasted prior to testing. Testing took place between 6:30am -9:30am. PARQ+ and physical activity forms were completed first followed by BODPOD and waist/hip circumference testing. Following lab testing, The Pittsburgh Quality Sleep Index (PQSI) was used to assess sleeping quality. Pearson's correlation coefficient was used to determine the relationship between variables. Significance was set at $p=0.05$. Data is presented as mean \pm SD. **RESULTS:** Subjects were 21.11 ± 1.5 years old with a body weight of 156.59 ± 32.7 lb. 15 subjects were physically active, and 12 subjects were inactive. Subjects presented with RMR of 1499.93 ± 321.1 kcal/day, body fat $22.09\pm 10.4\%$, and PQSI of 6.11 ± 2.8 . Results showed no statistically significant relationship between PQSI score and body fat ($R(27) = 0.24$, $p=0.22$), waist circumference ($R(27) = 0.22$, $p=0.28$), or RMR ($R(27) = 0.11$, $p=0.59$). **CONCLUSION:** There is little to no correlation between sleep and body composition in this population. Possible reasonings could be the age of this population as the average age was 21.11 years old which may explain why body composition variables were not correlated with sleeping patterns.

Supported by the Summer Undergraduate Research Experience (S.U.R.E) Grant #000567