How Does Sleep Affect Body Mass Index in College Students?

Lauren Dell’Arciprete, Sydney Ollinger, Jennifer A. Moxley, Andrea T. Barton, Tara B. Blackshear. Towson University, Towson, MD

PURPOSE: To compare sleep quantity and body mass index in college students. METHODS: A convenience sample of 99 college students participated in a free comprehensive physical fitness assessment which included measurement of height and weight to determine body mass index. Body mass index was categorized as normal (< 25 kg/m²) or overweight/obese (≥ 25 kg/m²). Participants also completed an online health survey which included questions pertaining to the number of hours of sleep per night during the week. Sleep quantity was categorized as 1-3 hours, 4-5 hours, 6-7 hours, and 8 or more hours per night. An unpaired t-test was used to examine the relationship between sleep quantity and body mass index. RESULTS: Average body mass index for all participants was 24.99 kg/m² (SD=4.69) and hours of sleep per weeknight was 7.0 (SD=3.06). The average body mass index for participants categorized as overweight/obese was 28.67 kg/m² (SD=4.22) and the number of hours of sleep per weeknight for the same group was 6.8 (SD=1.29). The average body mass index for participants categorized as normal was 21.96 kg/m² (SD=2.18) and the number of hours of sleep per weeknight for the same group was 6.61 (SD=1.29). Male participants had an overall average body mass index of 25.44 kg/m² (SD=4.63) and slept an average of 7.3 hours (SD=1.18). Female participants had an overall body mass index of 25.5 kg/m² (SD=4.67) and the number of hours of sleep per weeknight for the same group was 6.67 hours (SD=1.40). CONCLUSION: The results showed that, participants categorized as overweight/obese, had slightly more hours of sleep per weeknight compared to participants categorized as normal per body mass index standards. However, findings were not significant (t=0.72; p>.05).