



Mid Atlantic Regional Chapter of the American College of Sports Medicine

Annual Scientific Meeting, November 2nd - 3rd, 2018
Conference Proceedings
International Journal of Exercise Science, Issue 9, Volume 7



Assessing Self-Reported Physical Activity, Body Composition, and Bone Mineral Density in Wellness Fair Participants

Kory A. Stauffer, Tania S. Flink. Gannon University, Erie, PA

Past studies have shown that self-reported levels of physical activity (PA) and measured percentage of body fat (% fat) in adults is not consistent. In addition, few studies to date have examined how self-reported PA relates to bone mineral density (BMD). **PURPOSE:** To examine whether self-reported PA was reflective of an individual's measured body composition and BMD. **METHODS:** A population of 104 individuals (students, faculty, staff, and community members) was sampled at two university wellness fairs. Participants filled out the Godin Leisure-Time Questionnaire (GLTEQ), which examined self-reported PA for the past 7 days. From the GLTEQ, total leisure score (TLS) was computed in addition to how often they participated in vigorous physical activity (VPA). Body composition measures, including body mass index (BMI), % fat, and BMD (g/cm^2) were also measured for each individual. Regression analyses were performed to determine which predictor (BMI, % fat, BMD, and VPA) significantly related to TLS. In addition, GLTEQ responses, body composition measures, and BMD were examined in a small subset of the population ($N = 25$) to determine differences between athletes and non-athletes using independent t -tests. For all statistical measures, $\alpha = 0.05$. **RESULTS:** Of the variables examined, % fat ($\beta = -0.302$) and VPA ($\beta -0.492$) significantly predicted TLS, $p < 0.05$. Thus, as both the % fat of the participants and total days for VPA increased, TLS decreased in magnitude. No other variables, including BMD, significantly predicted TLS. TLS was 42% greater in athletes versus non-athletes ($p < 0.05$). Non-athletes reported an additional 0.8 days of VPA than athletes ($P < 0.05$), but were measured with 35% greater % fat compared to athletes, $p < 0.05$. **CONCLUSION:** Individuals with a higher % fat tend to partake in fewer leisure time activities than leaner individuals. In addition, those that reported greater amounts of leisure time performed more mild forms of PA. Based on body composition measures, non-athletes overestimated their amount of VPA compared to athletes, who may have underestimated their VPA due to being accustomed to high levels of PA. Finally, based upon our sample, the GLTEQ may not be an appropriate inventory to assess the relationship between BMD and self-reported PA.