Sitting Behavior and Physical Activity of College Students: Implications for Health Education and Promotion

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ABSTRACT

The purpose of this study was to provide a baseline assessment of sitting behaviors and physical activity among college students in a physical activity and wellness course. The International Physical Activity Questionnaire (IPAQ) was used to measure the physical activity and sitting behaviors of college students. Independent t-tests and ANOVAs were conducted to analyze differences in college students’ physical activity and sitting behavior based on demographic information. Findings indicated that males were more active than females in the following areas: moderate activity during leisure time, vigorous activity at work, and total vigorous activity. Females reported significantly more time spent sitting than males during the week and on the weekends. Based on this research, there seems to be a need for two concurrent goals relating to health promotion: 1) increasing physical activity, and 2) decreasing prolonged sitting behaviors. Recommendations for practice include revising health curriculums, training health professionals, and gaining stakeholder and leadership support.

Keywords: College Students, Gender, Health Education, Health Promotion, International Physical Activity Questionnaire (IPAQ), Lifestyle Modifications, Physical Activity, Sitting, Sitting Behavior, Wellness

INTRODUCTION

Adult educators, whether in formal or informal environments, have historically been successful at infusing theory, research, and practice into the discipline. Health educators and wellness professionals are among the many professionals under the umbrella of adult education. Regarding the issue of prolonged sitting behaviors, it seems that the practice of health education and health

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promotion, particularly in college environments, may not reflect the ever expanding literature about the dangers of prolonged sitting and physical inactivity.

The association of physical inactivity and poor health has been discussed at length by both academics and the popular media. While researchers have been warning of the damaging effects of sitting, the topic has finally started to be discussed in the mainstream media. An article in Time magazine entitled *Sitting is Killing You* details the damaging effects of prolonged sitting (Park, 2014). Raising awareness about the health consequences of sitting is very important. However, the effort to raise awareness about the issue comes too late for the many individuals whose health has already been negatively affected by prolonged sitting compounded by physical inactivity. Furthermore, the need to reduce sitting behaviors is lacking or underemphasized in health curriculums and health promotion practice.

The effects of sitting behaviors are damaging to individuals as well as population health. In a prospective study of 50-79 year-old women, prolonged sitting time was associated with increased CVD risk, independent of leisure-time physical activity (Chomistek et al., 2013). Healy, Matthews, Dunstan, Winkler, and Owen (2011) found associations of prolonged sedentary time with cardio-metabolic and inflammatory biomarkers, which are measures of biological processes in the body, suggesting benefits to cardiovascular disease prevention by reducing and breaking up sedentary time. Van der Ploeg, Chey, Korda, Banks, and Bauman (2012) reported that prolonged sitting is a risk factor for all-cause mortality, independent of physical activity, indicating a need for public health programming to promote the reduction of sitting time while increasing physical activity.

Pinto Pereira, Ki, and Power (2012) examined if sedentary behavior, including television-viewing and sitting at work, is associated with disease-risk. Researchers found associations of television-viewing and work sitting with biomarkers for CVD/diabetes in mid-adulthood. Proper, Picavet, Bemelmans, Verschuren, and Wendel-Vos (2012) examined associations between sitting time and mental health for workers and non-workers, and the role of weight status. Mental health was not associated with sitting time during transport or at work. Poorer mental health was associated with sitting during leisure time, and particularly TV viewing in the working population. BMI was a modifier, with significant positive associations for healthy-weight non-workers and obese workers. In addition, BMI and working status were modifiers between TV viewing and mental health.

The ACSM (2014) also emphasized that sedentary behavior (sitting for long periods of time) is distinct from physical activity, and has been associated with health risks. Sedentary behavior (from the Latin sedere—“to sit”) is the term used to describe sitting behaviors where energy expenditure is low. According to Owen, Healy, Matthews, and Dunstan (2010), “Even when adults meet physical activity guidelines, sitting for prolonged periods can compromise metabolic health” (p.1). Recent research indicates prolonged sedentary behaviors, like sitting at a computer, watching TV, or driving, are associated with disease and premature mortality despite participating in other physical activities.

The health risks associated with physical inactivity have been well documented and include increased rates of cardiovascular disease, Type II Diabetes, and even some types of cancer. The low percentage of Americans achieving the recommended levels of physical activity highlights the need to promote health behaviors in the United States. According to the US Department of Health and Human Services (2011), only 14.7% of females, compared to 21.1% of males, met recommendations for adequate amounts of physical activity for health. Throughout adulthood, females are less likely than males to achieve recommended levels of physical activity. In fact, for 18-24 year olds (the typical age range for students attending college in America) from 2007-2009, only 17.4% of females and 32.3% of males met the physical activity recommendations.
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