TACSM Abstract

Using Fitbit Competitions to Increase Physical Activity in College Students

OMAR RAMIREZ

Department of Health and Human Performance; Texas A&M University-Commerce; Commerce, TX

Category: Undergraduate

Advisor / Mentor: Bernhardt, Vipa (vipa.bernhardt@tamuc.edu)

ABSTRACT

According to the World Health Organization (2018), physical inactivity is a leading risk factors for global mortality. Only one in four college students meet the current federal Physical Activity Guidelines for Americans of engaging in ≥150min/week of exercise (Raynor & Jankowiak, 2010). **PURPOSE:** The advancement of technology, especially in the acquisition of physical activity data combined with the desire for virtual social interaction, has not been studied in college students. It is unknown if physical activity trackers and accompanying mobile apps, such as Fitbit, could motivate college students to be more physically active. It was hypothesized that wearing a Fitbit watch and participating in weekly competitions via the app will increase weekly step counts in college students as compared with a simple pedometer. **METHODS**: Seventeen students were randomly assigned to either the Fitbit (6F/3M, 22 ± 1 yr) or the pedometer group (4F/4M, 21 ± 2 yr). All participants wore pedometers in Week 1 to compare baseline data. The control group continued wearing the pedometer for three more weeks. The Fitbit participants were outfitted with watches for the next four weeks and instructed on how to use the competition component of the accompanying mobile app. Pre- and post-data on weekly step counts were compared using repeated measures ANOVA. **RESULTS**: There was no significant difference in weekly step counts between groups during Week 1 (Fitbit: 37,014 ± 19,676 vs Pedometer: 43,631 ± 14,499, $p > 0.05$). Analysis revealed a significant interaction (group*time, $p = 0.005$) with an increased step count by the Fitbit group (161 ± 76%), while the pedometer group showed a decrease (76 ± 33%). **CONCLUSION**: Fitbit participants were more motivated to be physically active, indicated by the continued increase in weekly step count throughout the weeks, whereas the pedometer group reduced their step count. The results confirm that merely tracking step count is not enough to maintain physical activity. Adding the social/competitive aspect of a mobile app can be a powerful motivator for college students.