Relationship Between Procrastination and Exercise Behavior Among College Students: The Mediating Effects of Time Efficiency

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Abstract
Procrastination is prevalent in the study and life of the college student population. There is evidence suggesting that procrastination can have a negative impact on mood and behavior. However, in the field of exercise, the effects and mechanisms of procrastination on exercise have not been widely studied. Therefore, this study investigates the relationship between procrastination and exercise volume of college students, and discusses the mediation effect of time efficiency. The sample comprised 910 university students from 5 provinces (female: 509, male: 401) who completed inventories assessing their procrastination, time efficiency and exercise volume, and the relationships between these variables were examined using a model of mediation. In the present study, the appropriate IRB approval has been obtained from East China Normal University. There are significant differences in procrastination (t = 2.43, p < 0.05) and exercise volume (t = 7.42, p < 0.01) among college students of different genders and no difference in the sense of time efficiency. The body mass index is classified as lean (BMI < 18.5), normal (18.5 ≤ BMI ≤ 23.9), overweight (24.0 ≤ BMI ≤ 27.9) and obese (BMI ≥ 28) by standard, and there are significant differences between body mass index and exercise volume (F = 7.51, p < 0.01). Procrastination was negatively correlated with time efficiency (r = -0.525, p < 0.01) and exercise volume (r = -0.159, p < 0.01), and there was a significant positive correlation between time efficiency and exercise volume (r = 0.164, p < 0.01). Mediating effect test shows that the time efficiency has a certain intermediary effect between procrastination and exercise volume (indirect effect = -0.090, LLCI = -0.163, ULCI = -0.012). Findings provide support that procrastination affects college students' physical exercise through time efficiency. We can start with improving college students' time efficiency to promote the participation of physical activities. Future research needs more attention to overweight and obese college students.

Keywords: procrastination, exercise behavior, time efficiency