

Relationships among Executive Functioning, Future Time Perspective, Identity and Physical Activity Self-Regulation among Low-Active, Middle-Aged Adults

Sean P. Mullen¹, John F. Adamek¹, Madhura Phansikar¹, Imani Canton¹, William A. Massey²

¹University of Illinois at Urbana-Champaign

²Oregon State University

“Lack of time” is one of the most commonly cited reasons for low physical activity participation and disengagement, yet new nationwide data revealed that Americans average over five hours daily of discretionary time. *Future time perspective* (FTP) may distort perceptions of time (i.e. actual, elapsed). Similarly, FTP and future exerciser identity (FID; viewing exercise as part of one’s future self-image) may influence one’s exercise self-efficacy (ESE) and goal-setting priorities and time management, and in turn, physical activity engagement. Evidence also suggests *executive functioning* (inhibition, memory) plays a role in modulating physical activity self-regulation (PASR). The purpose of this study was to test the hypothesis that inhibition control (assessed via Stroop task) and memory (Sternberg) are associated with future-related perceptions, and that FTP plays a role in FID, ESE, PASR, and LTE. Participants were derived from a baseline sample of 366 low-active, middle-aged adults (M age=49.36; 50.3% women) who were enrolled in two nearly identically-designed studies ($N=133$, $N=233$). Covariance modeling was conducted (*Mplus* v.8.4) using a mostly saturated model. Specifically, LTE was regressed on FID, ESE, PASR-time management and goal-setting, FTP, Stroop, Sternberg, age, gender, and education. Additional direct and indirect effect paths were tested. Model-to-data fit ($\chi^2=2.05(df=2), p=.36$; CFI=1.00; RMSEA=.01; SRMR.01) was adequate and hypotheses (two-tailed tests) were partially supported. Stroop had an indirect effect ($\beta=.02$, $p=.03$) on LTE via FID; Sternberg’s effect on goal-setting was not statistically significant (.07, $p=.08$). Indirect effect of FTP on LTE via FID was .02 ($p=.06$). Stroop, FID, goal-setting, and education had direct effects ($p<.05$) on LTE ($R^2=.16$). Although limited by its cross-sectional design, findings from this study extend the literature, and highlight potentially important roles of executive functioning, and general and domain-specific perceptions of time in modulating physical activity engagement.