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Honors Research Conference Abstract

In this study, I will examine the relationship between academic performance and self-reported physical activity, as well as symptoms of anxiety, and attributions about the benefits of physical activity as a stress-management technique. The project will extend experimental research in animal models, which has shown that exercise decreases anxiety (Fox, Hammack, & Falls, 2008; Salam et al., 2009) and improves learning (Falls, Fox, & MacAulay, 2010). Students enrolled in General Psychology (N=645) will be recruited to complete an online survey. It will comprise of standard measures of (1.) physical activity (Kohl, Blair, Paffenbarger, Macera, & Kronenfeld, 1988), (2.) anxiety (Spielberger, 1983), (3.) incentives for exercise (Duda & Tappe, 1989), and (4.) readiness to start a program of physical activity (Marcus, Selby, Niaura, & Rossi, 1992). Scores on these measures will be correlated with participants' academic performance, including quiz and exam scores, attendance, and participation in learning activities.

Being physically active has been shown to enhance confidence and improve stress management. However, previous research has not directly stated that physical activity could mediate the correlation between academic performance and anxiety. In this project, I will investigate the association between students' physical activity and their level of anxiety and stress, and performance in the course PSYC 001, General Psychology. I hope to demonstrate that optimal levels of physical activity are associated with course performance and lower levels of anxiety (particularly anxiety surrounding high-stakes exams). In addition, I hope to show that students who report low levels of physical activity and also report that they do not plan on becoming more active in the foreseeable future report higher levels of anxiety associated with their academic work, as well as lower course performance. Students in the pre-contemplation phase relative to physical activity (meaning that they do not acknowledge that their inactivity is a problem) will demonstrate overall lower course performance. Therefore, physical activity will be a key-mediating variable in this correlation.

Building on the research of my honors-thesis committee members, we will try to see if we can also identify similar patterns between humans and animals by analyzing the relationship between physical activity on academic performance directly through the effect on stress/anxiety.