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The Effect of Aerobic Training Intensity on Stress and Mood

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Dealing with stress is a common occurrence for college students, and their mood state may provide an accurate representation of how it affects them. One of the more widely used methods for dealing with stress is exercise. **PURPOSE:** to examine the effects of intense aerobic training on stress levels in college students. The secondary purpose was to investigate the effects of aerobic training intensity on mood in college students and whether intensity differently affects stress and mood levels. **METHODS:** The study included 25 college student track athletes between the ages of 18 and 23. Student athletes were training and actively competing in the season's track races. The control group consisted of 25 college-aged students between the ages of 18 and 23 who were not college athletes. Every two weeks over a four-week period, an online survey was sent out to gauge participants' stress levels and mental health. A baseline survey asked participants their gender/age, their running group intensity based on their event (High: 800–1500m; Medium: 3k-5k; Low: 5k-10k), their year in school/college major, average sleep, and a baseline stress ranking (1-10). Participants then completed the Perceived Stress Scale and selected questions from the Recovery-Stress Questionnaire (RESTQ)-76 - Sport Scale (items 6,7,10,12,14,15,16,17,18,19). These surveys were repeated two more times separated by two weeks. The survey for the control group was slightly different in that it did not include questions specific to aerobic running training. However, it asked participants about their level of fitness and how much time they exercise. They also completed the Perceived Stress Scale but only a portion of the RESTQ-76 Sport Scale (items 6,7,10,12). **RESULTS:** Females had a noticeably higher perceived stress score ($p < 0.05$) than men. Males had a mean of 13.8 and females had a mean of 17.9. The 800m/1500m group reported feeling vulnerable to injury at the highest rate (more than twice that of the other groups) ($p=0.003$). There was no significant difference on the perceived stress scale between training groups as well as the control group. **CONCLUSION:** After analyzing the results of the surveys, we can conclude that there was no significant difference in stress levels between the three aerobic training groups that we tested. The training groups themselves showed little to no effect on stress levels in collegiate athletes over the course of 4-week period and results were reflected similarly in the control group. **SIGNIFICANCE/NOVELTY:** The training groups had little to no effect on stress levels in collegiate athletes. Trends within the data show stress levels may be more closely linked to other aspects of life. This implies that differences in exercise volume and intensity may have little bearing on stress perceptions in a well-trained population of track athletes.