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The Effects of Exercise on Mental Health Among College Students

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The prevalence of mental health (MH) disorders among college-aged, young adults is alarmingly high, with many also experiencing poor physical health and comorbidities. **PURPOSE:** To examine the effects of exercise on MH among college students. **METHODS:** Fifteen participants (60% males, 20.0±2.0 years) volunteered to participate in this 8-week study. Nine participants completed the exercise (EX) intervention, while six formed the non-exercise control (CON) group. The pre/post mixed methods design collected and analyzed both quantitative and qualitative data. The Depression Anxiety Stress Scores (DASS-21) instrument was used to collect quantitative data, analyzed using a repeated measures analysis of variance (ANOVA). Qualitative data were obtained from open-ended responses and semi-structured interviews and analyzed with a coding framework in DeDoose 9.0. **RESULTS:** No statistically significant differences were found in depression (F=0.038, p=0.849), anxiety (F =0.535, p =0.478), and overall MH (F=0.452, p=0.513) scores between or within groups. The EX group's pre/post scores (mean ± standard deviation) for depression (pre: 1.11±2.62, post: 2.44±5.34), anxiety (pre: 1.00±0.87, post: 3.11±2.52), and overall MH (pre: 3.33±5.34, post: 8.55±13.06). The CON group's pre/post scores for depression (pre: 0.66±1.21, post: 2.32±3.83), anxiety (pre: 1.67±2.40, post: 5.16±6.49), and overall MH (pre: 4.33±4.23, post: 13.33±16.91). However, qualitative insights revealed that acute and chronic bouts of exercise improved MH in both groups. The EX group highlighted the additional benefit of social interaction during exercise, while the CON group reported improved MH as motivation for future exercise. Themes from interviews included various health benefits of exercise (38%), exercise improved sense of self (25%), and lack of exercise negatively impacted health (19%). **CONCLUSION:** Exercise interventions are promising for preventing and treating MH disorders, supported by the EX group's unanimous improvements in MH, highlighting the significant role of social interaction in enhancing well-being. Additionally, exercise positively influenced sense of self among both groups, with immediate improvements observed following acute exercise in the CON group. **SIGNIFICANCE/NOVELTY:** This study underscores the need for holistic approaches to enhance college students' mental and physical health. It expands current knowledge by demonstrating the immediate and long-term benefits of exercise on MH, emphasizing social interaction as motivation for exercise adherence. Conversely, the CON group's inactivity not only adversely affected MH but also amplified stress levels, and impaired academic performance, focus, and relationships. Integrating quantitative and qualitative data offers a comprehensive view of exercise's effects on MH.