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The Effects of COVID-19 Restrictions on College Students Physical Activity and Mental Health

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The public health restrictions put in place by colleges and states to reduce the spread of the COVID-19 resulted in forced isolation and modifications to health-related behaviors. College students suffer from high levels of stress and anxiety while also failing to meet the recommended physical activity guidelines. The restrictions and uncertainty associated with COVID-19 may have exacerbated this situation.

PURPOSE: To determine if students engaged in a reduced number of days, intensity, and minutes of exercise during health-related restrictions from COVID-19. Additionally, to determine if students experienced increased levels of anxiety, stress, and depression during health-related restrictions from COVID-19. Finally, to explore whether roommate status and location of permanent residence played a mediating role.

METHODS: Five-hundred and forty female (n =382), male (n =132), and non-binary (n =23) students completed a 29-question survey. The survey consisted of yes-no, multiple choice, or Likert scale questions on individual demographics, living arrangements, physical activity (i.e., days, minutes, intensity), sleep, diet, and mental health (i.e., sleep, anxiety, depression).

RESULTS: Significant changes in weekly days of exercise (pre=3 vs. post=6, $p=0.001$, $ES=0.663$) and intensity ($p=0.001$, $ES=0.464$) were reported. Additionally, increases in anxiety ($x^2=471$, $p=0.001$), stress ($x^2=516$, $p=0.001$), and depression ($x^2=331$, $p=0.001$) were reported. Student most frequently reported an increase in aerobic training (n=92) and a combination of reduced aerobic and resistance training (n=92). Significant main effects were found for ethnicity ($x^2 = 17.8$, $p = 0.003$) and northeast region residence ($x^2 = 7.96$, $p = 0.005$) on changes in stress. Significant main effects were observed for gender ($x^2 = 16.9$, $p = 0.001$), ethnicity ($x^2 = 15.9$, $p = 0.007$), and northeast region residence ($x^2 = 6.86$, $p = 0.009$,) on anxiety. Significant main effects were found for gender ($x^2 = 16.0$, $p = 0.001$) and ethnicity ($x^2 = 14.9$, $p = 0.011$) on depression.

CONCLUSION: Even in the face of pandemics, it is important for colleges to establish opportunities for students to engage in physical activity and exercise outside of recreational centers to allow them to meet recommendations while mitigating stress, anxiety, and depression.

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