

COVID-19 Vaccine Effects on Exercise Habits in College Students

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ABSTRACT

Coronavirus (COVID-19) affected and continues to alter lives across the world. The introduction of the COVID-19 vaccine brought changes to lockdown restrictions and a seemingly new normal. **PURPOSE:** to assess the effects of the COVID-19 vaccine on physical activity habits and attitudes among college students in the spring 2022 semester. **METHODS:** A link to a Qualtrics survey was emailed to all students enrolled in the spring 2022 semester at Texas A&M-Commerce. Respondents answered questions regarding their vaccination status, physical activity habits, and experiences with COVID. Qualitative answers were grouped and analyzed by common themes. Quantitative data were analyzed using descriptive statistics and differences between vaccinated and unvaccinated groups were analyzed using unpaired t-tests. **RESULTS:** A total of 444 responses were collected. Participants were predominantly White (58%), Bachelor's students (53%) with a median age of 27 years. 84 (19%) students reported they were unvaccinated and 360 (81%) reported they were vaccinated. The main reasons for why respondents got vaccinated were: to prevent personal infection and spread (n=123), to protect others from contracting COVID (n=56), due to recovery benefits (n=56), and because it was mandatory (n=41). Main reasons for not getting vaccinated were: because there wasn't enough research on the vaccine (n=25), afraid of the potential side effects (n=13), not necessary (n=8), and had a previous COVID infection (n=7). Vaccinated respondents were less comfortable in indoor spaces ($P < 0.001$) and the campus recreation center ($p = 0.033$) than unvaccinated students, while no difference was found between vaccination status and comfort levels outdoors ($p > 0.05$). For the 91 vaccinated and 34 unvaccinated students who contracted COVID, those who were unvaccinated returned to exercise in 3.4 ± 5.9 weeks, while those who were vaccinated returned to exercise in 6.0 ± 8.6 weeks ($p = 0.076$). Further, only 52% of vaccinated respondents and 63% of unvaccinated respondents met ACSM recommendations by performing moderate to vigorous intensity cardiorespiratory exercise at least 3 days/week. 45% of vaccinated and 62% of unvaccinated participants met ACSM recommendations by completing at least 2 days/week of resistance training that involved all major muscle groups. 43% of vaccinated participants and 48% of unvaccinated participants met ACSM recommendations by performing at least 3 days/week of flexibility training. **CONCLUSION:** The study conducted suggests that vaccinated students were less likely to exercise indoors, less likely to meet ACSM recommendations, and more likely to take longer to return to exercise after contracting COVID. Possible explanations for the results of this study pertain to the effects of COVID-19 and the resulting fear that affected comfort levels and physical activity habits in college students a year ago.