

Physical Activity And Mental Health In Injured Adolescents

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PURPOSE: Approximately 20% of adolescents meet the minimal standards of moderate to vigorous physical activity (PA) national guidelines. Adolescents that accrue lower PA have greater depression and anxiety symptoms when compared to adolescents that engage in higher amounts of PA. Musculoskeletal injuries are common in adolescents and may exacerbate depression or anxiety symptoms that were decreased due to the ability to partake in PA. In addition, injuries may cause new anxiety and depression symptoms. While PA has generally been shown to help decrease and protect against both depression and anxiety symptoms in adolescents, some recent work has questioned the impact of PA on adolescent mental health. The purpose of this study was to determine if adequate levels of PA in adolescents that have experienced an injury had less anxiety and depression symptoms.

METHODS: A total of 63 adolescents (59% female; mean age = 14.57±1.52 years) between the ages of 12-18 that were being treated by a tertiary sports medicine clinic were enrolled. Participants filled out the Patient Health Questionnaire-9 (PHQ-9) and the Generalized Anxiety Disorder-7 (GAD-7) to measure depression and anxiety symptoms, respectively. Scores greater than 5 were considered elevated for each scale and prompted further evaluation by the attending physician. PA was self-reported by asking exercise vital sign questions to obtain days per week and minutes per day of moderate to vigorous physical activity from the past week.

RESULTS: Average PHQ-9 score was 3.63±4.11, average GAD-7 score was 3.33±3.60 and average weekly PA was 319.37±261.12 minutes. There were 22% with elevated PHQ-9 scores, nearly 24% with elevated GAD-7 scores and 35% reported meeting the PA guidelines in the last week. There were no differences between those who met or did not meet PA guidelines on the proportion of those with elevated depression or anxiety scores ($p=.47$, $p=.93$, respectively).

CONCLUSIONS: While there were no differences between the prevalence of elevated depression or anxiety scores between those who met or did not meet PA guidelines, injured adolescents had high rates of elevated scores for anxiety and depression. Clinicians should consider screening injured adolescents for anxiety and depression to aid in early intervention.

Naturalistic Fluctuations In Night-to-night Sleep Duration And Quality And Their Associations With Next Day Perceived Stress And Negative Mood

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68% of Americans experience poor sleep hindering daily functioning, yet sleep fluctuates from night-to-night *within* the same person. Implications of these fluctuations remain unknown.

PURPOSE: We examine associations between last night's sleep and next-day perceived stress/negative mood in a naturalistic setting and how depression moderates these relationships.

METHODS: 167 individuals (136 women, 29 men, 2 other gender) completed a 21-day daily diary assessment. Using multilevel modeling, we tested within-person associations between last night's sleep and next day's perceived stress and negative mood. Using within-person multilevel mediation, we tested how insufficiently long and low-quality sleep impact next day's negative mood via perceived stress and the moderating role of clinically-relevant levels of depression.

RESULTS: Perceived stress ($b=-0.01$, $p=0.04$) and negative mood ($b=-0.05$, $p=0.04$) were lower following nights of longer sleep. The association between night's sleep quality and perceived stress ($b=-0.01$, $p=0.04$) and negative mood ($b=-0.01$, $p=0.001$) were moderated by depression. In those experiencing depression, better night's sleep quality related to lower next-day perceived stress ($b=-0.02$, $p=0.001$) and negative mood ($b=-0.01$, $p<0.001$). Mediation analyses indicated last night's sleep impacts negative affect via perceived stress while controlling for physical activity: perceived stress ($b=-0.01$, $p=0.03$) and negative mood ($b=-0.01$, $p=0.04$) were lower when engaging in more physical activity.

CONCLUSION: Within-person fluctuations in sleep impacted next-day perceived stress/negative mood. The daily functioning of for those with depression was sensitive to naturalistic fluctuations in sleep occurring suggesting that sleep may be an important target for interventions reducing stress and negative mood in depression.

Funding: The John D. and Catherine T. MacArthur Foundation, ISI Foundation, Paul Allen Foundation, Army Research Office (Grafton-W911NF-16-1-0474), National Institute on Drug Abuse (1K01DA047417-01A1), and HopeLab. D.M.L. and D.S.B. acknowledge support from the Army Research Office (W911NF-18-1-0244). The content is solely the responsibility of the authors and does not necessarily represent the official views of any of the funding agencies.

Influence Of Covid-19 Pandemic On Mental Health, Stress, Energy, And Sleep In Undergraduate Students

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PURPOSE: We wanted to assess if there is any relationship between the COVID-19 pandemic and impact on mental health, stress levels, energy levels, and sleep habits within the college student populace.

METHODS: Non-athlete and athlete participants from both the University of California, San Diego and Columbia University, volunteered to complete an online questionnaire that contained general questions (school, age, sex, location before and after the pandemic), questions about amount and type of exercise before and after pandemic, and lastly, questions regarding the pandemic's impact on each individual's mental health, stress levels, and other factors.

RESULTS: There was no significant difference found between sexes or institutions of attendance. While, for both athletes and non athletes, there were few statistically significant relationships between change in exercise and the assessed factors (mental health, stress, energy, sleep), the correlations between the pandemic's influence on the assessed factors were all strong ($>.50$). Small sample size, voluntary participation, and use of questionnaires to collect data could have affected the differences between athletes and non athletes and might not have been representative of the population.

CONCLUSION: While most of the assessed factors did not present individually significant relationships with the participants' various changes to exercise routine, when compared to one another, there were very strong correlations noted. This suggests that the pandemic had a negative effect on all of the factors, and the factors could have a cumulative effect on exercise.

Assessing The Effect Of The Covid-19 Pandemic On College Athletes

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The prevalence of coronavirus disease 2019 (COVID-19) has been estimated in a variety of study populations, and the effect of the ongoing pandemic on mental health has been previously assessed. However, these factors have not been comprehensively assessed in college athletes.

PURPOSE: To assess the prevalence of COVID-19, risk factors, and impact of the pandemic on mental health and sleep quality in college athletes.

METHODS: In the present study, a cross-sectional survey was administered to college athletes at the University of South Florida. The survey included demographic information and questions regarding history of COVID-19 testing, compliance with social distancing guidelines, mental health, and sleep quality. Descriptive statistics were reported to summarize the cohort of athletes that completed the survey. The prevalence of self-reported COVID-19 in the cohort was reported, along with metrics summarizing compliance with social distancing and the effect of the pandemic on mental health.

RESULTS: In total, 133 athletes have completed the survey to date. Of these, 104 had complete data on the metrics reported in the present study. Of these 104 respondents, 65 (63%) were male, mean (SD) age was 19.9 (1.7), 61 (59%) were non-Hispanic white, 39 (38%) were football players, and 28 (27%) reported previously testing positive for COVID-19. Compliance with social distancing guidelines was strong, with 86 (83%) athletes reporting extensive handwashing. 77 (74%) athletes were worried about potentially catching COVID-19, and 65 (63%) reported feeling lonely. Additionally, sleep quality worsened during the pandemic for 22 (21%) of the athletes.