



THE IMPACT OF COVID-19 RELATED SCHOOL CLOSURES AND SPORT CANCELLATIONS ON THE HEALTH OF ADOLESCENT ATHLETES

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Background: In March 2020, schools were closed to in-person teaching and interscholastic sports cancelled in an attempt to slow the spread of the COVID-19. Child health experts have stated that school closures may have profound psychosocial consequences for students and need further study.

Hypothesis/Purpose: To identify how COVID-19 related school closures and sport cancellations impacted the health of adolescent athletes.

Methods: Adolescent athletes in Wisconsin were recruited via social media to complete an online survey in May 2020 while schools were closed to in-person teaching and interscholastic and club sports were cancelled. Assessments included the: General Anxiety Disorder-7 Item (GAD-7) for anxiety, Patient Health Questionnaire-9 Item (PHQ-9) for depression, the Pediatric Functional Activity Brief Scale (PFABS) for physical activity, and the Pediatric Quality of Life Inventory 4.0 (PedsQL) for quality of life. PHQ-9, PFABS and PedsQL scores were compared with historical data (HD) of Wisconsin adolescent athletes (N = 5,231) collected during normal school and sport operations in the years 2016–2018.

Results: A total of 3,243 (58% female, Age = 16.1±1.2 yrs., grades 9 – 12) participated in the study. May 2020 participants reported higher (worse) PHQ-9 scores than the HD participants (mean: 8.0 (95%CI: 7.8, 8.2) vs 3.3 (3.1, 3.5), $p < 0.001$) as well as a higher prevalence of moderate to severe levels of depression (32.9% vs 9.7%, $p < 0.001$). May 2020 Participants also reported lower (worse) PFABS scores (mean: 12.2 (95%CI: 11.9, 12.5) vs 24.7 (24.5, 24.9) $p < 0.001$) and lower (worse) PedsQL total scores compared to athletes in the HD group (78.4 (78.0, 78.8) vs. 90.9 (90.5, 91.3) $p < 0.001$). Females in May 2020 reported increased moderate and severe anxiety percentages than the males in May 2020 (27.7% vs 22.3%, $p < 0.001$).

Conclusions: COVID-19 related school closures and sport cancellations in Wisconsin were associated with increased anxiety and depression as well as decreased physical activity and quality of life in adolescent athletes. The potential negative health impacts of prolonged school closures and sport cancellations should be taken into account when evaluating steps to limit the spread of COVID-19.