



# Competing against COVID-19: have we forgotten about student-athletes' mental health?

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## INTRODUCTION

Since the onset of the COVID-19 pandemic, athletes have expressed significant grief and frustration, attributed to alterations in routine, limited or modified training and the postponement of sporting events across the globe.<sup>1,2</sup> The additional strain from the removal of team support networks, which are often crucial components for stress management,<sup>1</sup> can result in significant mental and physical health consequences, including low mood, sleep disruption, worsening diet and deconditioning.<sup>2</sup> There is a current lack of attention on the unique mental health needs of student-athletes (ie, athletes who participate in secondary or postsecondary school sport programmes during their academic studies) during the COVID-19 pandemic, leading to a limited response from sporting organisations and academic institutions in addressing athlete-specific concerns.<sup>3</sup> Accordingly, the purpose of this editorial is to suggest directions for future research and provide recommendations to ensure the mental health needs of student-athletes are met during this period of extraordinary disruption and uncertainty.

## Student versus student-athlete mental health during COVID-19

The college student population already exhibits high levels of psychological distress in non-pandemic settings,<sup>4</sup> which has worsened as a result of the pandemic.<sup>5-7</sup> A Chinese study of 7143 college students identified the presence of mild to severe anxiety in a quarter (24.9%) of their

sample, noting that the severity of anxiety symptoms were positively correlated to academic delays ( $r=0.315$ ,  $p<0.001$ ), economic effects ( $r=0.327$ ,  $p<0.001$ ) and impacts on daily life ( $r=0.316$ ,  $p<0.001$ ).<sup>5</sup> Among another sample of 66 students, a high prevalence (84.9%) of pandemic-related worries and increases in negative emotions were noted, including stress (28.8%), anxiety (45.5%) and depression (22.7%).<sup>6</sup> Importantly, the authors concluded that physical activity directly alleviated these general negative emotions.<sup>6</sup> Similar relationships between mental health and physical activity among students have also been reproduced in the USA, where large disruptions in exercise resulted in a 15%–18% increase in self-reported clinical depression during the pandemic, in comparison with those who maintained their baseline habits ( $p=0.012$ ).<sup>7</sup>

Collectively, the findings from general student cohorts provide insights on the potentially adverse mental health effects of COVID-19 on student-athletes, who rely heavily on exercise, training and competition for stress management and mental well-being. A recent study of over 13 000 US secondary school athletes found that 68.5% and 70.4% of participants reported mild to severe anxiety and depression symptoms, respectively.<sup>8</sup> Similar findings were also noted from a National Collegiate Athletic Association (NCAA) survey conducted in April–May 2020, representing all conferences and divisions across the USA. The rates of reported mental health concerns were approximately 150%–250% higher than historical estimates for NCAA student-athletes, with women reporting a higher prevalence of concerns than men.<sup>9</sup> In comparison with non-athlete students,<sup>5,6</sup> it is clear that student-athletes are an at-risk population who may require additional mental health support and tailored approaches to care.

## What factors contribute to negative mental health outcomes among student-athletes?

For most student-athletes, participation in organised sport has been associated

with academic success and psychological benefits, including heightened happiness, stress relief and the reduction of depression and anxiety risk.<sup>10</sup> With the removal of intercollegiate sport due to COVID-19 restrictions, many student-athletes may feel deprived of this much-needed outlet, which is a major component of their personal and athletic identities. In addition to the direct impacts that the COVID-19 pandemic places on student-athletes, their mental, social and physical health may also be affected indirectly through the reduction of many positive influencers that accompany access to team sport (figure 1).

## How should student-athlete mental health concerns be addressed?

Recognising the timely call for solutions aimed at reducing the impact of COVID-19 on student mental health,<sup>4</sup> the onus to seek and initiate care should not be placed solely on the student. It is incumbent upon sporting organisations and academic institutions to screen, manage and monitor the mental health of their student-athletes. In addition to the recommended psychotherapy, pharmacotherapy and alternative care strategies intended to manage the mental health of elite athletes during COVID-19,<sup>11</sup> student-athletes require further tailored approaches that suit their scholarly and athletic lifestyles. For example, partnership with mental healthcare providers to provide appropriate psychoeducational material to teams (ie, alternative coping strategies that focus on healthy and adaptive ways to deal with academic stress) and model the importance of self-care should be encouraged. Importantly, student-athletes in the NCAA survey indicated that they desired educational resources for mental and social health, particularly from coaches and athletics department members.<sup>9</sup> Furthermore, efforts aimed at reducing stigma associated with student-athlete mental health concerns are necessary, as some athletes may be reluctant to seek care due to fear of negative perceptions from their peers. A framework to manage student-athlete mental health during the COVID-19 pandemic, highlighting recommendations at the level of the sport organisation, academic institution, and individual/team, has been proposed in online supplemental table 1.

## CONCLUSIONS

To prioritise student athletes' mental health, we can address the

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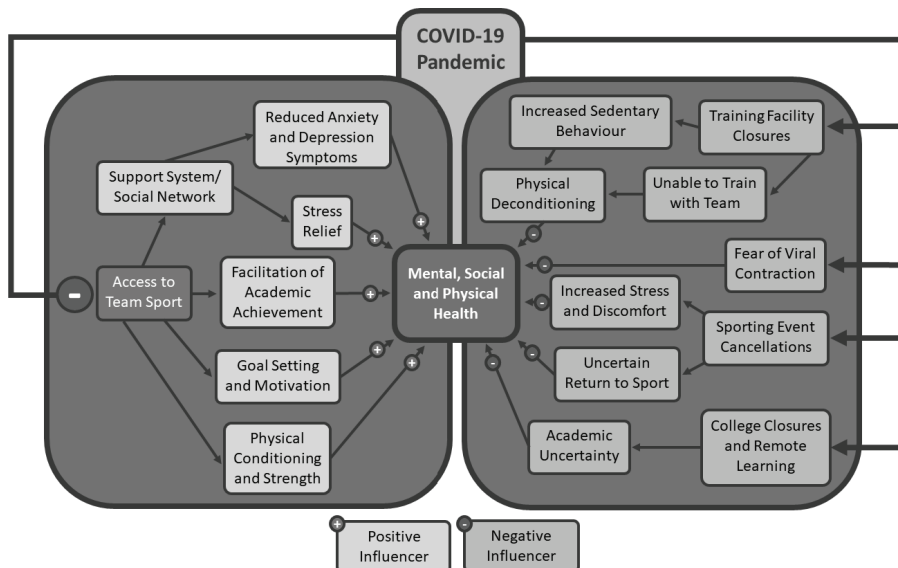
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**Figure 1** Impacts of the COVID-19 pandemic on student-athlete mental, social and physical health. The COVID-19 pandemic has both direct and indirect effects that contribute to the overall health and mental well-being of student-athletes. In addition to severing the numerous positive influencers on student-athlete mental, social and physical health (as a result of access to team sport), the COVID-19 pandemic has also led to downstream effects that negatively impact the well-being of this population.

multiple impacts that the COVID-19 pandemic has on this group through continued development of psychosocial support initiatives for student-athletes, supported by novel evidence surrounding the mental health of this subpopulation. Overall, there is an imminent need to understand how academic institutions, sporting organisations and healthcare systems can collaborate in their response to the COVID-19 crisis, so that negative psychological outcomes can be mitigated and athletes can return to play.

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