

THE EFFECTS OF COVID ON THE MENTAL HEALTH OF COLLEGE ATHLETES
A STUDY ON COLLEGE STUDENT-ATHLETES INVOLVED IN TEAM VS.
INDIVIDUAL SPORTS

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ABSTRACT

This retrospective study proposes to understand how social distancing, lockdown, and inability to train and compete are affecting athletes. Existing literature focuses on a series of effects, namely uncertainty about the future, financial instability, and inability to find mental support that are recognized as triggers for anxiety, frustration, anger, depression, and other psychological disorders. This study aims to understand the immediate effects during the lockdown and when athletic activities resumed, by surveying the athletic community at LMU. Through a survey to a group of student-athletes in different disciplines, the study also aims to classify mental distress impacts in team-sports versus individual sports, namely soccer, volleyball and water-polo versus tennis and golf, also differentiating by women and men over a period of roughly nine months. Expected results include for athletes in team sports to experience a more significant deterioration regarding their mental health during lockdown as well as a greater improvement in their mental health when training has resumed; lastly, female athletes are forecasted to be more affected than male athletes during the lockdown.

INTRODUCTION

2020 has been the year no one expected. With a global pandemic forcing the nation into a lockdown many have suffered. One of the aspects most negatively impacted is mental health. The lack of social support as well as the inability to leave one's home has left many hopeless and anxious about the future. One of the groups of people who may have been impacted the most are athletes. College athletes had to witness their seasons being cancelled, many had to move back home for quarantine, and many have not seen their teammates or coaches for multiple months. The abruptness of response to the pandemic even if inevitable, may have had a drastic negative impact on the mental health of athletes. This study collected relevant literature recently published investigating the effects of lockdown and reduced practice, as well as social distancing on athletes. Given the lack of specific surveys on college student athletes in the US and California in particular, this study is surveying the student-athletes community at LMU to gain more direct insights on impacts on their mental health, as well as potential differences by gender and by type of sport played.

BACKGROUND, RELATED WORK, AND MOTIVATION

College athletes provide a great amount of profit and entertainment for people all over the United States, events like March Madness generate over \$200 million in revenue¹. Athletes are perceived as a great asset to the economy and are exposed to an even greater amount of pressure at a young age. The high levels of pressure, with practice, school and trying to balance a social life can sometimes be extremely difficult to handle. Because of the COVID pandemic, most college athletes had their season cancelled and were unable to train, which greatly impacted their sense of purpose, increasing uncertainty and affecting their mental health. However, according to BMJ², a weekly peer reviewed medical journal, athletes may be among the least likely to seek mental health support and help due to the image they believe they need to uphold.

Being a student-athlete, I wanted to conduct a study on the effects COVID has had on the mental health of athletes. Specifically, how the lack of social support, the lack of exercise due to lockdown, and the inability to practice with peers related to the levels of anxiety, depression and other psychological distresses within the athletic community. In particular, I wanted to research which period of the lockdown had the greatest impact, what athletes have done to cope with the pandemic and how their mental health has been affected. The study will also differentiate between team-sports and individual sports, **time** and by gender.

¹ Steve Berkowitz, *Impact of coronavirus means NCAA faces \$475 million decrease in revenue, credit-rating firm estimates* in USA Today, March 20, 2020.

² BMJ, *Stigma Deterring Elite Athletes with Mental Health Issues from Seeking Help- Coaches and sports governing bodies key to changing the culture, say experts*, Science Daily, May 16, 2019.

As explained by Reardon et al. (2020), COVID could cause or worsen various mental health symptoms and disorders such as anxiety (about contracting the virus), obsessive-compulsive disorder (obsessive hand washing), PTSD, depression and suicidal thoughts in athletes. Being young, athletes are generally developmentally less prepared to deal with the uncertainty that the pandemic has brought about. Moreover, Reardon et al. (2020) illustrate that since physical activity is regarded as having antidepressant and anxiolytic effects, reducing or stopping physical activities in combination with other relevant factors, such as lack of social support are all worsening mental health symptoms and disorders in athletes. Lack of social support in this case will include the inability to rely on peers and coaches during social isolation; reduced social interaction due to uncertainty about sport resuming as well as recalibrated training programs; lack of access to training staff, teammates and coaches, which could induce loss of daily routines and self-care. Additional factors, which are also impacting mental health of student-athletes include family infection risks; loss of income; anxiety about contracting COVID-19 during sporting events or otherwise, and persistent community distress and family conflicts (including living situations that might be high risk for interpersonal violence). Furthermore, multiple studies conducted in regard to professional athletes in other countries, such as South Africa (Pillay et al., 2020) or high school student athletes in the State of Ontario in Canada (Liu et al., 2020) also investigated the effects of the pandemic and how it impacted athletes ready to compete this year, who might not be in the same shape and mental fitness next year. Both concluded that elite athletes suffered from higher levels of stress, many describing feeling more anxious and even depressed about the uncertainties of the future. I have yet to find a study on the effects COVID has had on the mental health of US college athletes. College athletes should be researched due to the fact that they are not professional athletes, therefore they have a lot more on their plate, which includes going to class, getting good grades and trying to maintain a healthy social life.

In my personal experience, team sport athletes are impacted and reacting differently to the restrictions imposed by the lockdown or similar orders compared to individual sport athletes. Moreover, a recent study (Pluhar et al., 2019) surveyed a sample of young athletes and confirmed that a higher proportion of individual sport athletes reported anxiety or depression than team sport athletes. Individual sport athletes were more likely than athletes in team sports to play their sports for goal-oriented reasons, as opposed to for fun, thus contributing to even more stress during a pandemic. Since the mental health benefits of participation in organized sports may vary between individual sport athletes and those playing team sports, I added this evaluation to the study. Another interesting study (Shaal et al., 2011), which observed 13% of the French athlete population in 2011, also highlighted important differences in psychopathology between male and female athletes, demonstrating that the many sex based differences reported in the general population apply to elite athletes as well, thus one might infer that even during a pandemic, impacts and reactions could also be determined by gender biases.

The main hypotheses I am testing in this study are based on the impacts by COVID-19 restrictions in regard to levels of anxiety and depression in college athletes, namely:

1. College athletes who play team sports (such as volleyball, soccer or water polo) will experience a greater decline in mental health than single sport athletes (such as tennis, golf or cross country) during lockdowns or when practices/seasons are cancelled.

2. College athletes who play a team sport will have a greater improvement in their mental health than athletes who play an individual sport when practices started again.
3. Female athletes' mental health will suffer more than male athletes' due to the fact that women are more likely to seek social support as well as seek help when it comes to their mental health.

METHODS

This study is designed as a retrospective survey, which will investigate if and how the COVID pandemic induced lockdown and following restricted movements are affecting student-athletes mental health, namely depression and anxiety. The predictor variables include gender, time and individual versus team sports. The outcome variables are depression and anxiety levels.

The study will also add a cross-sectional feature comparing observations among different populations in the same single point in time, namely women versus men players during lockdown and after when practice resumed, and team versus individual sport players during lockdown and after when practice resumed.

Sample: A total of 19 teams at LMU will be surveyed: women volleyball, women beach volleyball, women water polo, women soccer, women swimming, softball, women tennis, women rowing, women cross country, women basketball, men tennis, men water polo, baseball, men tennis, men golf, men rowing, men cross country, men soccer and men basketball, all ranging between the ages of 17-24.

Procedure: a survey will be prepared and provided to the whole teams. To be able to distribute the survey every interviewed person will fill in informed consent, in order to ensure that it is an ethical study, respects athletes' privacy, and give the participants the opportunity to opt out. The questionnaire includes close-ended questions to address the perceived level of distress before the pandemic, while in lockdown, when back on campus and when training resumed. The student athletes will also have the opportunity to address particular distresses they faced in open questions. The questionnaires will be anonymous, only gender and team vs individual sport will be requested. The survey will ask the student-athletes also about social support, namely whether they had access to coaches, teammates and trainers, if they were aware that they might need psychological/moral support in such a situation, whether they requested social support, and whether they received it. Finally, the survey will ask about social support for student-athletes that could not train nor play.

The survey will be similar to the one used by Liu (Liu et al., 2020), but will include more questions regarding the athlete's sport and their coping mechanisms among other things. The survey will include measures of depression and anxiety that have already been used in previous studies.

Analysis: the analysis will calculate outcomes for all responses, will explain qualitative responses, finding potential similarities, comparing per gender and type of sport, differentiating between team vs individual sport. Some inference on the effects and potential effects for the future will be added.

EXPECTED RESULTS

Given the hypotheses, expected results are as follow:

1. College athletes who play team sports (such as volleyball, soccer or water polo) will experience a greater decline in mental health than single sport athletes (such as tennis, golf or cross country) during lockdowns or when practices/seasons are cancelled.
2. College athletes who play a team sport will have a greater improvement in their mental health than athletes who play an individual sport now that practices have started again.
3. Female athletes' mental health will suffer more than male athletes' due to the fact that women are more likely to seek social support as well as seek help when it comes to their mental health.

As shown below, Figure 1 depicts the comparison of team and individual sports. One can clearly see that the mental health of team athletes is projected to deteriorate and then improve to a much greater degree compared to the mental health of individual athletes.

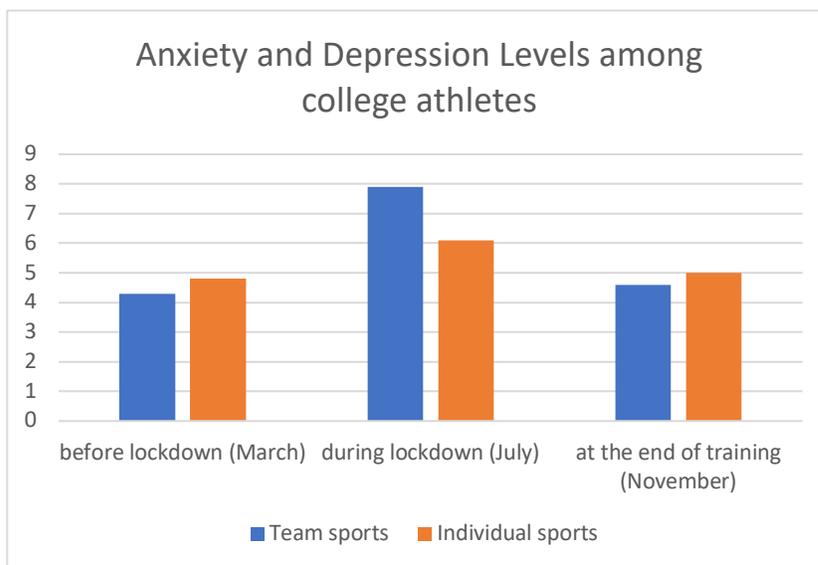


Figure 1- expected result of depression and anxiety levels comparing team sport athletes and individual sport athletes

As presented in Figure 2, the expected results in the comparison of depression and anxiety levels between male and female athletes will show that female athletes felt the impact of COVID 19 the most.

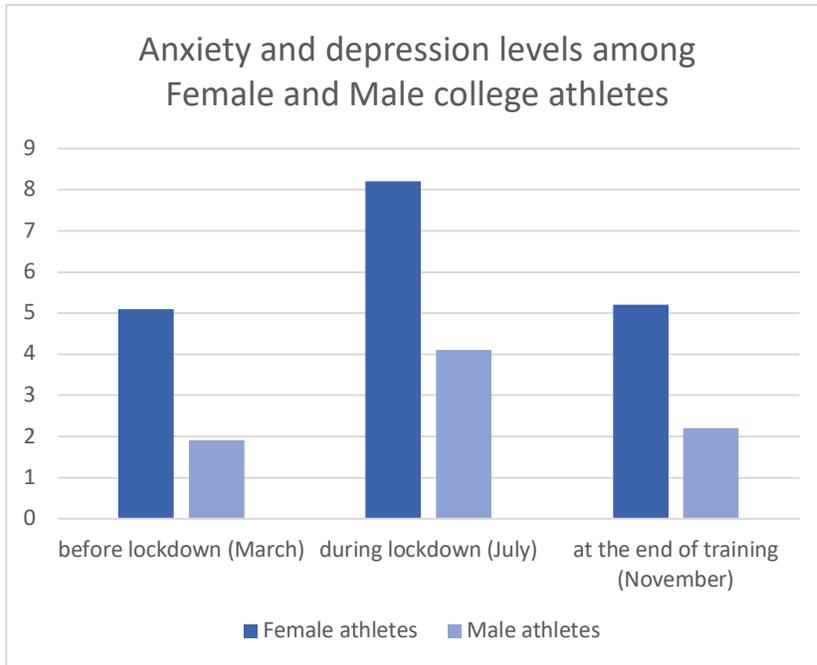


Figure 2- expected results of depression and anxiety levels comparing female and male athletes

The shock, uncertainty, and hopelessness connected to the lockdown and following restrictions had the greatest impact on student-athletes at LMU. I expect also to find anxiety and depression as the most common psychological distresses among LMU students.

The study differentiates between team sports and individual sports. I foresee that not being around teammates is affecting team sport athletes more at the beginning of the pandemics, while helping them in coping with the restrictions, as they start interacting with teammates. I think teammates can constitute a good proxy for social support. The effects could be different for single-sport athletes as they are lacking team support and peer supports and might feel more anxiety and depression as a result. On the other hand, single sport athletes most likely could train more effectively during the lockdown as they do not need the full team to perform. Lastly, I suspect women would react in a different manner than men, due to the fact that women are more likely to seek social support, experience depression and seek help for their mental well-being. Women generally are more willing to seek help for mental distress and I assume this would be the case also among student-athletes at LMU.

Therefore, I predict for team sport athletes to experience a much sharper decline in mental health than single sport athletes during lockdown. However, I also reckon team sport athletes to experience a much more dramatic increase in mental health now that practices have started again and they can rely on coaches, trainers as well as team-mates support. Lastly, I believe that women at LMU experienced a greater mental health toll due to their nature of seeking social support when they're in need, and their inability to find it during the lockdown. I also imagine women in team sport to recover faster than peers in individual sports.

CONCLUSION

The retrospective study aims to observe athletes at LMU and their mental health throughout the lockdown and now that most sports have been able to start practicing again. The study will evaluate variables such as ability to access social support, in particular, mental health support and their ability to reduce distresses. The study will add cross-sectional components when investigating the effects on team or individual sport players as well as differentiating by gender.

Expected results are confirming that restrictions due to COVID 19 are highly impacting mental health of student-athletes at LMU, also because of the lack of social support (access to coaches, trainers, team-mates) and mental health support in particular. The cross-sectional analysis is expected to confirm that women are facing harder effects, as the limited access to social support is affecting them the most. Also, team sport players are expected to face higher negative effects at the beginning of the lockdown and to recover faster than individual sport players when practice resumes, because of social support.

Due to the fact that the lockdown has been lifted there will be some shortcomings for the study, the study will be a retrospective survey and the participants will be asked to rely on their memory in order to answer questions regarding their mental health prior to the lockdown and during the lockdown.

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BUDGET AND TIMELINE

The survey will be designed by me and administered online. It will be sent as an email or text for the athletes to fill out. Since there will be human subjects, I would like to reward them with a \$5 Starbucks gift card, which would be a total of \$1,750 (350 athletes x\$5).

The timeline would be as follows: it will take roughly four to eight weeks to develop the survey, I am planning on it taking the participants roughly 15-20 minutes to complete. When I administer the survey, which will be around the end of November, it will only take a day since it will all be done online. It will take about one to two weeks to receive all the responses and an additional four weeks to analyze all the data. Due to the fact that it is a retrospective survey, the survey will only need to be administered once.