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### The Impact on Adolescent Mental Health in South Jersey Due To the Cancellation and Return of Sports

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# The Impact on Adolescence Mental Health in South Jersey due to the Cancellation and Return of Sports

Dr. Tara Pellegrino, DO., Student Doctor Tara Young

## Introduction

Due to the Covid-19 pandemic, many organized sports programs have been canceled or limited in participation. While research prior to the pandemic has strongly suggested that participation in organized sports has benefits for mental and physical health, especially in adolescence (1,2,3,4), there have been minimal studies on how the removal of organized sports affects mental health outcomes. Additionally, studies (5,6,7) have found that the stress of the pandemic and its associated life changes has greatly decreased mental health outcomes in our target population. These findings may indicate the importance of return to organized sports in a time where mental health outcomes are already low in our communities.

Our study is one of the first to analyze this important relationship between the closures of sports, the return to sports, and their associated impact on mental health in the wake of the pandemic in New Jersey. With sports starting to open back up in the area, evaluating the impact that this lapse in participation has had on the athlete's mental health is increasingly important.

## Hypothesis

We anticipated that the majority of respondents would have either had limited or fully canceled sports seasons. It was our hypothesis that the cancellation and lack of participation in sports programs negatively impacted the mental health of the pediatric population. With the return to sports, this significant decrease in children's mental health was expected to improve.

## Methods

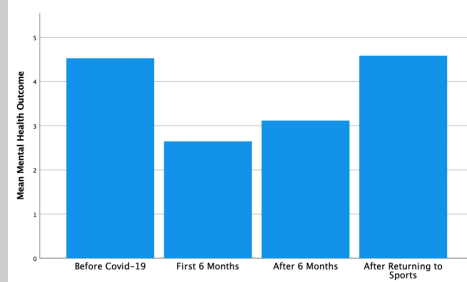
A 22 question survey was utilized to gather data for this study. Mental health was self reported on a scale of 1-5 using a sliding scale, with the sliding scale all the way to the right being the best/happiest participants have been [5], sliding scale all the way to the left being the worst/saddest/most anxious participants have been [1].



Recruitment of participants was facilitated through flyers containing a QR code to the survey and through online links to the survey. Recruitment flyers were hung in the offices of medical providers and small businesses in southern New Jersey, distributed to sports teams in person and shared electronically via Facebook. No in person surveys were utilized due to changing Covid-19 restrictions. The survey itself was created using Qualtrics and all data was stored and collected through Qualtrics on password encrypted devices. Data was collected May through October of 2021.

## Results

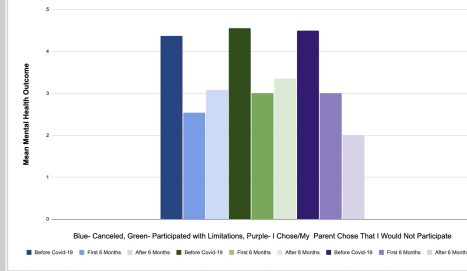
### Mental Health Outcomes



**Fig 1. Mental Health Outcomes**

Figure 1 shows a mean mental health score of 4.35 before covid-19, 2.73 during the first 6 months, 3.09 after 6 months, and 4.59 after returning to sports. Two-sided t-test with a p of <0.001 shows a significant difference between before Covid-19 mental health outcomes and mental health outcomes of both the first 6 months and after 6 months. No significant difference was found between before Covid-19 and after returning to sports, nor between the first 6 months and after 6 months.

### Mental Health Outcomes by Limitation Type



**Figure 2. Mental Health Outcomes by Limitation Type**

Figure 4 shows how mental health was impacted during limitation/cancellation of sports due to limitation type. ANOVA testing showed no significant difference in mental health after limitation/cancellation of sports when comparing any time period between the three types of limitation/cancellation.

## Demographics



## Conclusions

The limitation/cancellation of sports is associated with a decrease in mental health outcomes as self-reported by our respondents. Return to participating in sports increased mental health outcomes to pre-pandemic levels. This finding supports our original hypothesis and leads us to conclude that not only does participation in sports improve mental health outcomes, but that removal of sports decreases mental health outcomes. Additionally, we found no correlation between limitation type and mental health outcomes, suggesting that limitation/cancellation of any kind leads to this outcome.

## Recommendations

In respect to our findings, we suggest organized sports resume as soon as possible in order to alleviate the negative mental health outcomes that closure has on the pediatric population in New Jersey. Consideration should be taken for broader regional studies outside of New Jersey.

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