

The Pandemic's Effect on Women's Collegiate Weightlifting Participation and Performance

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Introduction

- The covid-19 pandemic interrupted virtually all aspects of society including collegiate sports. The training, competition, and travel of many collegiate weightlifters were also impacted.
- While grade school and high school sports were decreased to varying degrees during the 20-21 school year^{1,2}, University level sports opportunities were more often modified but maintained in most parts of the US³.
- Even when sports participation was available, individual student athletes, especially women, had to balance and negotiate a wide variety of academic and personal hardships during that time⁴. Even when athletes were able to continue training with or without modification, travel difficulties, and performance detriments could have occurred preventing participation and optimal performance.
- While larger, better funded collegiate athletics organizations (NCAA and NAIA varsity athletics) were largely able to maintain their athletics programs with modifications, smaller grass-roots sports like Olympic Weightlifting may have had a harder time maintaining competition and training.

Purpose

- The purpose of this study was to evaluate the effect of the covid-19 pandemic on the participation and performance of female collegiate weightlifters at the National University Championships.

Methods

- USA Weightlifting's archival data from the Women's National University Championships (WNUC) from 2017 to 2023 were analyzed⁵.

- Frequency, and descriptive statistics were completed. An ANOVA was performed to determine if the Sinclair total (a measure of weightlifting performance across weight classes), differed between competition years.
- The years analyzed were between 2017 (pre-pandemic) to 2023 (post-pandemic).

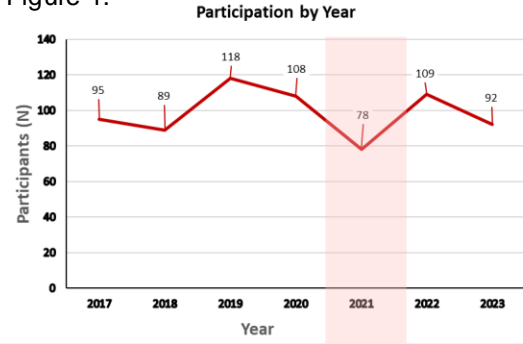
Results

- 758 archived female weightlifting performances (22.1±2.1 years, 65.8±12.7kg body mass) in the seven WNUC between 2017 and 2023 were evaluated.
- Weight-class specific analysis was hindered by the changes in weight classifications approved by IWF in 2018.
- There was a substantial drop in the number of female competitors at the WNUC in 2021.
- Approximately 34% fewer women competed at the NUC in 2021 as compared to 2020. The participation rate rebounded to within 5% of the pre-pandemic levels in 2022, (Figure 1)
- There was no significant difference in the mean Sinclair total between the evaluated years ($F_{(6,751)}=0.901$, $p=0.49$; Figure 2).

Key Findings

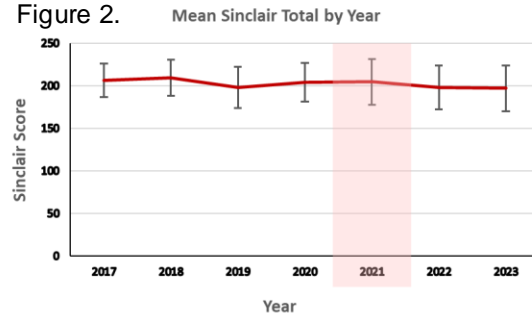
- Approximately 34% fewer women competed at the NUC in 2021 as compared to 2020 (Pre-pandemic shutdown).
- The participation rate rebounded to within 5% of the pre-pandemic levels in 2022. So, it appears that participation rates were only depressed in 2021.
- There is no significant difference in the Sinclair total between the evaluated years ($F_{(6,751)}=0.901$, $p=0.49$).

Figure 1.



Note. Participation was 34% lower in 2021 than previous years, but returned to previous levels in 2022.

Figure 2.



Note. no significant difference in the mean Sinclair total between the evaluated years ($F_{(6,751)}=0.901$, $p=0.49$).

Conclusions

- Because the 2020 WNUC was held in February before the shutdown in March, the impact of the pandemic related disruptions to training and competition were substantially limited to the 2021 championships.
- Though the number of female competitors was reduced by 34% in 2021 the level of competition as indicated by the average Sinclair total was similar to that of the years that preceded and followed.
- This indicates that the reduced participation represented a mix of higher and lower performing athletes.
- Further analysis of participation and performance for collegiate and other athletes during the pandemic is needed.

Practical Applications

Though individual athletes may have been greatly impacted by the pandemic, collegiate women's weightlifting appears to have had only a moderate interruption that rebounded quickly from pandemic related disruptions.

References

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