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Author Acknowledgement

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Abstract

This study focused on exploring the lived experiences of student-athletes during the COVID-19 pandemic at a midwestern university in the United States of America. Survey responses from collegiate athletes regarding perceptions of strength and conditioning training during the pandemic uncovered meaningful information to inform practices of strength and conditioning personnel during unexpected disruption to daily operations. Sixteen student athletes from a Midwest university were the respondents providing feedback to open-ended survey questions during fall semester of the 2021-2022 academic year. Student perspectives offer important insight about cares and concerns that athletic administrators, coaches and institutional leaders should consider when developing future contingency plans to navigate large-scale disruption that may prevent teams from gathering to engage in regular routine strength and conditioning training. Specific recommendations for strength coaches to better serve athletes include developing strategies to maintain consistency in individual training, establishing and maintaining ongoing personalized communication with athletes, and monitoring fatigue levels of athletes and making appropriate adjustments.

Keywords: *Safe Return, Strength and Conditioning, COVID-19, Disruption.*

Introduction

The National Collegiate Athletic Association (NCAA) reports adverse effects on college athletes' mental health and well-being during the COVID-19 pandemic (NCAA, 2020). Specifically, concerns include lack of access to athletic competition and practice, safe training spaces, uncertain futures, and missed opportunities to engage in competitive sporting events to showcase talent. Regarding strength and conditioning training, college athletes cite barriers related to the pandemic that negatively affected training. These barriers include lack of access to equipment and facilities and the safety concerns of exposure to other players during infectious disease outbreaks (NCAA, 2020). Safe return to play issues concern coaches and sports medicine professionals (Galway, 2021).

The National Strength and Conditioning Association (NSCA) encourages coaches to recognize changing circumstances in response to the pandemic crisis (NSCA, 2021). While steps are taken to solidify guidelines of proper return to

play after long periods of inactivity during the pandemic, college athletes' perceptions regarding returning to a regular sport schedule may inform guideline revisions.

Purpose Statement

The purpose of this Participatory Action Research (PAR) study was to explore collegiate athletes' perceptions of strength and conditioning training during a pandemic.

Research Questions

This qualitative study sought to better understand the perspectives of current student-athletes during the COVID-19 pandemic. Three research questions guiding this inquiry include:

RQ1: How do student athletes perceive strength and conditioning during COVID-19?
RQ2: What challenges did college athletes experience during the pandemic?
RQ3: What recommendations do student athletes offer for improving strength and conditioning during a pandemic?

Background

The COVID-19 (SARS-coV-2) pandemic is an unprecedented worldwide crisis (Bentlage, 2020). The virus is a respiratory infection with a broad range of symptoms and is much more devastating to older populations and to those who are immunocompromised (World Health Organization, 2020). COVID-19 has a mortality rate of 4–6%. While these numbers are not as devastating as other viruses, the rate at which the virus spreads poses an imminent threat to the health of the population. In the last 20 months since the first case was reported in the United States, 39.7 million more cases were documented in the United States alone (N.Y.T., 2021). The impact of exposure to COVID-19, subsequent quarantining, recommended social distancing, and lockdowns negatively impacted college athletes' ability to train and maintain optimal health (Andreato, 2020).

Lockdowns as a result from the COVID-19 pandemic revealed new and difficult challenges for strength and conditioning coaches (Ryan, 2020). Unlike a typical year, student athletes had no direct strength and conditioning coaching,

feasible programming, training partners or even equipment. Consequently, coaches could not ensure best practices and athletes suffered. Moreover, studies show a large uptick in mental health issues among athletes as well as sports related injuries upon return to play (Platt, 2020).

Review of Literature

Adverse Effects on Athletes from COVID-19

An NCAA Student-Athlete Well-Being Study conducted in the Fall of 2020 posited student athletes reported elevated rates of mental exhaustion, anxiety, hopelessness, and feelings of depression. In most instances, the rates of reported mental health concerns experienced within the month of February 2021 were 1.5 to 2 times higher than historically reported by NCAA student athletes in pre-pandemic studies (Paskus, 2021).

More than 40% of student athletes across divisions cited local regulations and one-quarter cited lack of access to appropriate facilities and equipment as barriers to fall training. Student athletes also indicated that emotional barriers were impacting their ability to train, including fear of exposure to COVID-19 (28%), lack of motivation (24%), feelings of stress or anxiety (17%), and sadness and depression (10%) (Paskus, 2021).

The COVID-19 pandemic led to modified graduation timelines and negatively impacted career planning for college upper-classmen. Among seniors, 18% of men and 12% of women expected a delayed graduation date and nearly half of all seniors reported loss of job or internship opportunities as a result of COVID-19 (Paskus, 2021).

According to *The Impact of COVID-19-Related Shutdown Measures on the Training Habits and Perceptions of Athletes in the United States: A brief research paper*, athletes did not have a diverse array of resistance training equipment available at the time of the shutdown measures, which resulted in notable reductions in training frequency and time spent on sport-specific activities. The research paper posited that athletes and coaches did not have adequate time to appropriately prepare training programs designed for in-home training, especially for extended periods of time (Jagim, 2020).

Physical Concerns: Return to play

The NSCA predicted an uncertain future landscape as pertains to training practices for strength and conditioning coaches. Possible return to play or training concerns after long periods without structured training with coaches include extreme de-conditioning, increased risk of injury and overtraining, adverse weight gain or changes in body composition and slowed or interrupted progress with individual rehabilitation programs (NSCA, 2021). The NSCA concluded that after periods of inactivity, athletes are especially vulnerable to exertional injuries. Because of the shelter-in-place restrictions during the COVID-19 pandemic, most training by athletes was interrupted or limited, causing susceptibility to exertional injuries (NSCA).

Strength and conditioning practitioners are concerned with potential injury of student athletes upon return to play. The Physical Medicine Blog discussed that after the 2011 National Football League Lockout, athletes experienced more Achilles' tendon ruptures. On average, there are eight Achilles tendon ruptures throughout a season. In the 2011 season following a fast transition into training camp from a pre-season of inactivity due to the lockout, there were 10 Achilles tendon ruptures in the first 12 days of training camp alone (Galway, 2021).

There is direct cause for concern due to COVID-19. Frontiers in sports and Active Living posited there were significant injury increases in the German soccer super-league 'Bundesliga'. Reportedly, "The injury rate per game following the COVID-19 lockdown was calculated to be 0.84 compared to 0.27 per game prior to the onset of COVID-19 (12.6% of 537 athletes in 82 games following the COVID-19 lockdown vs. 11.2% of athletes injured in 224 games). Athletes were 3.12 times more likely to have sustained injuries resulting in removal from play following the COVID-19 lockdown. Chi-square analysis demonstrated a significant difference between the injury rate post-lockdown with the injury rate pre-lockdown ($\chi^2 = 164.84$, $p < 0.001$)" (Seshadri, 2021).

This point is proven further based on the data collected by the Journal of Sports Medicine. A large increase in injury rates among Major League Baseball players after return to play from the COVID-19 lockdown occurred. The journal cites a significant increase in injury incidence for both pitchers and fielders in 2020. These injury rates were dramatically increased for pitchers and fielders and had more to do with upper extremities than lower. As such, conclusions were drawn that the injuries were from a lack of sport specific preparation prior to the start of the season (Platt, 2020)

Theoretical Framework

The theoretical framework supporting this inquiry is the Theory of Planned Behavior (TPB). TPB is a psychological theory that links beliefs to behavior and suggests attitude, subjective norms, and perceived behavioral

control together shape an individuals' actions. As result from the theory, athletes' beliefs during a lockdown may affect strength training outcomes.
Negative beliefs about access to equipment, training partners. and a lack of external motivation to train could negatively affect athletes' training.

Methodology

This qualitive study utilized Participatory Action Research (PAR) to provide a practical form of inquiry to explore athlete perspectives during COVID-19. The goal of action research and a PAR design is explicitly to empower participants to engage in the research process to improve shared experiences by applying philosophical foundations of PAR, which embraces the shifting of understandings where shared realities exist (Kelly, 2005). This study aimed to collect participants reflections on strength and conditioning training and recommendations for practitioners. The study includes qualitative survey questions that amplify the voices and opinions of student athletes while integrating perspectives into shaping the application of the findings. Bergold and Thomas (2012) posited that participatory research methods aim toward including the people whose actions are under study.

Convenience sampling was used to select participants for the study. Patton (2002) explains convenience sampling implies participants are selected based on ease of access. The researcher selected a pool of 30 NCAA collegiate athletes across eight different sports (five women's teams, three men's teams) who compete and attend school at a Midwestern university. Data collection focused on a qualitative survey administered to student athletes in the fall semester of the 2021 academic school year. The survey was answered anonymously and included six open ended questions pertaining to perceptions of strength and conditioning training. Of the 30 surveys distributed, 16 responses were recorded. For analysis purposes, verbatim coding was used to map participants' words and phrases as well as concept coding to assign macro levels of meaning to data. These two qualitative analysis forms are useful and appropriate in recent qualitative analysis literature (Miles, Huberman, & Saldana, 2020). Participants in this study included student-athletes at the college level attending a medium size university in the Midwestern area of the United States.

Findings

Findings from this project suggest that the ongoing disruption of COVID-19 in intercollegiate strength and conditioning training deserve critical inspection.

Demographics of Participants

Participant	Sport	Ethnicity	Gender
Participant #1 "Jackson"	Baseball	Caucasian	Male
Participant #2 "Mark"	Football	African American	Male
Participant #3 "Maria"	Basketball	Asian	Female
Participant #4 "Sheila"	Track and Field	African American	Female
Participant # 5 "Crystal"	Volleyball	Caucasian	Female

Ethics and Confidentiality

The assignment of pseudonyms for participants in this study provides the necessary confidentiality to protect participant's identity. Ethics in the research process includes making sure that participants understand the right to consent, keeping personal and identifiable information private, ensuring no harm will come from participation, and following all institutional and legal guidelines. Participants voluntarily provided responses to open-ended qualitative questions through electronic survey format.

Results and Discussion

Development of strategies to maintain consistency, establish ongoing communication, and monitor fatigue levels emerge as overarching themes when considering the statements made by respondents to open-ended survey questions. The analysis of textual quotes presented below support the emerging themes that the researcher found to support the research questions that guided this line of inquiry about the perceptions of college student-athletes during the COVID-19 pandemic. This research study follows the tenants of Participatory Action Research (PAR).

Theme 1: Develop Strategies to Maintain Consistency in Individual Training

Each of the five study participants made mention of the need for developing strategies to maintain consistency in individual training as a primary recommendation to be improved in strength and conditioning. Notably, Jackson stated "I think it (individual programming) will help injured athletes or an athlete facing an ongoing problem get the help of a specific rehab program" noting the importance of programming around each athletes' specific conditions primarily during return to play periods after an injury. Maria stated "I would try to make the workouts more individualized…. each athlete needs to improve in different areas…To be able to structure workouts to the personal needs of athletes would be awesome to see" noting the appreciation athletes feel when coaches individualize programming.

From the study, it appears athletes prefer a high level of individualized care and specific attention from strength coaches. This level of care and attention is what causes athletes to further commit to the program coaches prescribe. The respondents indicated that personal attention and individualized training is a way strength and conditioning efforts may improve.

Theme 2: Establish and Maintain Ongoing Personalized Communication

All participants asserted the need for coaches to establish and maintain ongoing and personalized communication throughout the coach-to-athlete relationship. Specifically, Jackson advocated 'Just create a good coach-player bond with the athletes and they will be willing to put in work for you." Mark thought similarly about the importance of a personal bond when he advised "Just be there for them (athletes). You (coaches) spend a lot of time with them and to have their trust means a lot." Maria made a similar comment about the open line of communication between athletes and coaches when she proposed "Get to know your athletes and ask for their feedback."

This study proposes that athletes may prefer a personal relationship with coaches and to be cared about as individuals, as opposed to a team as a whole. The respondents indicate that coaches could be more effective if establishing personalized and ongoing communication with athletes is a point of emphasis.

Theme 3: Monitor Fatigue Levels and Make Appropriate Adjustments

Four out of five participants mentioned the need for coaches to monitor fatigue levels of athletes and make appropriate adjustments to programming as needed. Sheila stated "Understanding how we (athletes) are feeling before a workout and making the warm-up longer on days we aren't feeling the best or doing a cool down stretch after the lift helps us feel good at practice" noting the importance of considering the physical readiness of athletes regardless of what was programmed for that day. Crystal would agree with Sheila and revealed "More mobility and stretching after lifts" is something of importance. Similar to Sheila and Crystal's comments, Maria proposed to "Talk to the athletes about certain parts of the body hurting and avoid certain things that worsen injuries" highlighting the importance of daily fatigue monitoring as athlete's physical state alters regularly.

In conclusion, the COVID-19 pandemic was a challenging circumstance that did not exclude the field of strength training and conditioning at the college level. Providing student-athletes with the necessary guidance and support to remain healthy and safe from a distance for an extended period of time without a set end date is a burgeoning endeavor. The perspectives of student-athletes during the COVID-19 pandemic offer important insights about cares and concerns that athletic administrators, coaches and institutional leaders may consider when developing future contingency plans to navigate large scale disruption that may prevent teams from gathering to engage in regular and routine strength and conditioning.

Recommendations

As more institutions of higher education employ technology resources to deliver remote instruction either permanently in some cases or intermittently in others, the co-curricular units like athletic departments must make parallel plans. Preparing athletic departments and student-athletes for unexpected disruptions may help athletic departments maintain a high-level of competitiveness and training.

Future research in sports management and organizational leadership should expand research on the perspectives of student-athletes during events that impede normal operations and jeopardize the ability of athletic departments and coaches to keep student-athletes in shape.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-t

Andreato, L. V., Coimbra, D. R., & Andrade, A. (2020). Challenges to athletes during the home confinement caused by the COVID-19 pandemic. *Strength & Conditioning Journal*, *42*(3), 1–5. https://doi.org/10.1519/ssc.0000000000000563

Bentlage, E., Ammar, A., How, D., Ahmed, M., Trabelsi, K., Chtourou, H., & Brach, M. (2020). Practical recommendations for maintaining active lifestyle during the COVID-19 pandemic: A systematic literature review. *International Journal of Environmental Research and Public Health*, *17*(17), 6265. https://doi.org/10.3390/ijerph17176265

Bergold, J., & Thomas, S. (2012). Participatory Research Methods: A Methodological Approach in Motion. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *13*(1). https://doi.org/10.17169/fqs-13.1.1801

Galway, B. (2021, April 15). *Are athletes returning to sport after covid-19 more at risk of injury?* Biodex. Retrieved October 26, 2021, from https://www.biodex.com/physical-medicine/blog/are-athletes-returning-sport-after-covid-19-more-risk-injury.

Jagim, A. R., Luedke, J., Fitzpatrick, A., Winkelman, G., Erickson, J. L., Askow, A. T., & Camic, C. L. (2020). The impact of covid-19-related shutdown measures on the training habits and perceptions of athletes in the United States: A brief research report. *Frontiers in Sports and Active Living*, *2*. https://doi.org/10.3389/fspor.2020.623068

Kelly, P. J. (2005). Practical suggestions for community interventions using participatory action research. *Public Health Nursing*, *22*(1), 65–73. https://doi.org/10.1111/j.0737-1209.2005.22110.x

Miles, M. B., Huberman, A. M., & Saldaña Johnny. (2020). *Qualitative Data Analysis: A methods sourcebook* (4th ed.). SAGE.

NCAA Research. (2021, February). *Student-Athlete Well-Being Study (Fall 2020).* NCAA. Retrieved September 01, 2021, from https://ncaaorg.s3.amazonaws.com/research/other/2020/2021RES_NCAA-SA-Well-BeingSurveyPPT.pdf

NSCA. (2020, May). *COVID-19: NSCA Guidance on Safe Return to Training for Athletes*. NSCA - National Strength and Conditioning Association. Retrieved September 01, 2021, from https://www.nsca.com/contentassets/61c0fb0a476149848de009f1630fa457/nsca-covid-19-rtt.pdf.

Patton, M. Q., & Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Sage Publications.

Platt, B. N., Uhl, T. L., Sciascia, A. D., Zacharias, A. J., Lemaster, N. G., & Stone, A. V. (2021). Injury rates in Major League Baseball during the 2020 COVID-19 season. *Orthopaedic Journal of Sports Medicine*, *9*(3), 232596712199964. https://doi.org/10.1177/2325967121999646

Ryan, S. (2020, July 1). Covid-19 and Sports: From an uptick in injuries to mental health issues, the potential risks for athletes are plentiful. *Chicago Tribune*. Retrieved September 9, 2021, from https://www.chicagotribune.com/sports/ct-sports-return-medical-experts-coronavirus-20200701-tdrpbruvzrcyddrzmlhhhxpr4e-story.html.

Seshadri, D. R., Thom, M. L., Harlow, E. R., Drummond, C. K., & Voos, J. E. (2021). Case report: Return to sport following the COVID-19 lockdown and its impact on injury rates in the German Soccer League. *Frontiers in Sports and Active Living*, *3*. https://doi.org/10.3389/fspor.2021.604226

The New York Times. (n.d). *Coronavirus in the U.S.: Latest map and case count* [Infographic]. Retrieved August 20, 2021, from https://www.nytimes.com/interactive/2021/us/covid-cases.html

Walker, J. M., Brunst, C. L., Chaput, M., Wohl, T. R., & Grooms, D. R. (2021). Integrating neurocognitive challenges into injury prevention training: A clinical commentary. *Physical Therapy in Sport*, *51*, 8–16. https://doi.org/10.1016/j.ptsp.2021.05.005