

The Effects of the COVID-19 Pandemic on Athletic Trainers of the UNC System

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Introduction:

The onset of COVID-19 has had major effects on the health and well-being provided to athletes participating in sports. One of the most challenging impacts has dealt with how athletic trainers continue to provide quality care to athletes given social distancing and stay at home policies. With the mounting fear of virus spikes, resurgences, and ongoing increased safety precautions, athletics must adapt and develop new ways to respond to the changing environment. Therefore, this study seeks to address how athletic trainers are impacted by the COVID-19 Pandemic and the ways in which they are developing new approaches to respond to the pandemic.

Background:

COVID-19 and The Closing and Reopening the State of North Carolina

In 2019, a new strain of Coronavirus was discovered called COVID-19. According to the World Health Agency (WHO), "Coronaviruses are a large family of viruses which may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS)" (Q&A, 2020). While the origins of the virus are unclear, its first outbreak was in Wuhu, China and soon spread across the world. As it spread, many countries ordered stay at home orders and forced businesses and schools to close. In March 2020, the World Health Agency (WHO) declared COVID-19 a pandemic (Listing of WHO's, 2020). The United States of America reported its first case of COVID-19 on January 21, 2020 and within a few months, there were over a 100,000 total cases within the nation (Previous U.S., 2020). As the number of cases rose, many states, including North Carolina, started to implement stay at home orders, moved schools to online learning, and forced businesses to close (Staying ahead, 2020a). Colleges and Universities would follow and switch to online learning as well (UNC System, 2020).

When the nation began to re-open, a new problem had to be solved how do we run effectively

while also operating safely and within new government guidelines. Each state had its own rules and regulations about reopening. For North Carolina, the plan of reopening would be in three phases. Phase one would keep most of the rules and regulations from the original shut down with only a few exceptions (Cooper, 2020a). On May 22, 2020, North Carolina entered phase two (Staying ahead, 2020b). This phase allowed for more business to reopen, many at half capacity or other restrictions. Phase two also kept the rule that people should stand at least six feet apart and on June 26, 2020, North Carolina required its citizens to wear a mask while in public. (Cooper, 2020b) The rules and regulations applied to places of business such as retail, salons, restaurants, farms, and factories.

During this time, the world of athletics would face issues and hardships as the pandemic spread and changed. Many leagues cancelled their sports as the virus entered their country and on March 12, 2020 the National Collegiate Athletic Association (NCAA) canceled all Winter and Spring sports for the 2020 year (Osburn, 2020). Across the world from professional to amateur sport, including the Olympics, were canceled or postponed. This would cause many athletic departments to implement budget cuts to make up for lost funding. Nearly every college athletic department in the nation found itself looking for ways to save their athletic programs while also looking to remedy inefficiencies to save money. This would not be possible for some departments. At East Carolina University, four sports were cut from their college to help reduce their athletic expenditures by 4.9 million dollars and Appalachian State was forced to cut three sports from its department (East Carolina, 2020a; App State, 2020). Only a month after WHO declared COVID-19 a pandemic, nearly 100 college sports teams in America were cut (Press, 2020a). This led to mounting concerns heading into the summer, as many sports teams questioned whether they would even return to play in the fall.

Return of College Sports

For the most part, the return of sports in North Carolina would be left to the teams and their leagues. On June 1, 2020, the NCAA allowed Division 1 college athletes to return to campus for

voluntary practices (Hosick, 2020). For East Carolina University (ECU), 30 football players returned to its campus (East Carolina 2020b). These athletes, and the athletes who would follow them, were tested and educated on COVID-19. If an athlete tested positive, they would self-quarantine and receive daily checkups from ECU Athletics Medical Staff. Athletes would have to have their temperature taken daily, stand 6 feet from each other, clean all equipment, and have their own water bottles sanitized by the athletic training staff daily. UNC Chapel-Hill athletes would also undergo electrocardiograms and other testing to ensure the health of athletics before they returned to their sport's activities (University of North Carolina Athletics, 2020). While schools across the nation would have similar protocols, many would still have to stop their training for a short period of time due to positive COVID-19 test (Dinich 2020; Schlabach, 2020).

While the NCAA decided that it's Fall seasons and championships (except for football) would be moved to the Spring, conferences and schools still had to decide what they would do in the Fall (Johnson, 2020). Schools either played all, none, or only a few sports. (David & Kercheval, 2020; Bonnette, 2020). By the time college sports started, North Carolina had entered phase 3 which only allowed outdoor stadiums to have 7% capacity and 10 people in indoor stadiums (Phase 3, 2020) This would cause many leagues to either not allow fans into its stadiums or limit the attendance to family of the student athletes only.

College Sports and the UNC System

Division 1 college athletic conferences are put into three different groups. These groups are Football Bowl subdivision (FBS), Football Championship Subdivision (FCS), and Division 1 subdivision (D1S). FBS contains 10 conference and is usually regarded to be the highest level of competition, specificity in football. The FBS can also be split into two group of five conferences. These two groups are those granted autonomy, unofficially called Power 5, and those not granted autonomy, unofficially called Group of 5 schools (Hosick 2015). FCS schools are the remaining colleges with football teams and

D1S are colleges without football. Each group has different standards, rules, and requirements causing different effects in each group. One of the biggest effects is the financial situation. FBS autonomy schools spend the most followed by FBS non autonomy schools (Finances, 2020). Autonomy school's \$120.17 million 2019 expenses were 312% (\$81.62 million) more than the non-autonomy schools' expenses of \$38.55 million. D1 FCS and D1S schools' expenses in the same year were around \$20 million. Table 1 depicts information about each athletic department within the UNC System. The five FBS schools house 41.1% of the total number of sports teams within the UNC System and have 55.7% of the total number of athletic trainers. The remaining ten schools only have 44.3% of the total number of athletic trainers within the UNC System while having 58.8% of the total number of sports teams. Heading into the 2020 fall season, one question asked was how these differences in resources would affect each school as it tried to manage the pandemic, especially the medical staff in charge of many of the COVID-19 protocols.

Athletic Trainers

According to the National Athletic Trainer's Association, athletic trainers are "multi-skilled health care professionals who render service or treatment, under the direction of or in collaboration with a physician, in accordance with their education, training and the state's statutes, rules and regulations." (Athletic Training, 2019). Athletic trainers are not personal trainers. Rather than putting an athlete through workouts and practice to better the athlete's skill and ability, an athletic trainer services include prevention of injuries, emergency care, diagnosing injuries, therapeutic intervention, and rehabilitation of injuries (Who Is Taking, N/A). While working with other health care professionals, an athletic trainer is helping their athletes/patients stay safe while doing their physical work (Fincher et al., 2010). Athletic trainers needed to adapt during this pandemic threatening to cancel all sports.

Table 1
UNC System Schools Sports Information

University	Division	Conference Group	Conference	Fall Sports Plan	Number of Sports* ¹	Number of Athletic Trainers* ²
Appalachian State University	1 FBS	Group of 5	Sunbelt	All Sports	16	13
East Carolina University	1 FBS	Group of 5	American	Football Only	16	13
Elizabeth City State University	2	Other	CIAA	No Sports	11	2
Fayetteville State University	2	Other	CIAA	No Sports	11	1
North Carolina A&T State University	1 FCS	Other	MEAC	No Sports	15	8
North Carolina Central University	1 FCS	Other	MEAC	No Sports	13	3
North Carolina State University	1 FBS	Power 5	ACC	All Sports	21	15
UNC Asheville	1 FCS	Other	Big South	No Sports	14	4
UNC-Chapel Hill	1 FBS	Power 5	ACC	All Sports	26	16
UNC Charlotte	1 FBS	Group of 5	C-USA	Football Only	16	11
UNC Greensboro	1 FCS	Other	SoCon	No Sports	15	7
UNC Pembroke	2	Other	Peach Belt	No Sports	14	8
UNC Wilmington* ³	1	Other	CAA	No Sports	18	9
Western Carolina University	1 FCS	Other	SoCon	No Sports	14	8
Winston-Salem University	2	Other	CIAA	No Sports	11	4

*1 At the beginning of 2020 Fall Season, total 231

*2 Based on each university athletic staff list, total 122

*3 Does not have a football team

Issues Within Athletic Training

Athletic training is a career that faces a high attrition rate. The career requires many hours of commitment both during the week and weekends without the pay that many other health care fields offer (Mazerolle et. al 2012). Athletic trainers also find it hard to have families and pursue their career (Bowman, Mazerolle, and Goodman 2015). These issues have caused many athletic trainers to seek careers outside the athletic training field. While the causes of the attrition rate have been identified there have not been any wide scale successful measures taken to improve these issues. Adding to the uncertainty of athletic training is the creation of the entry level master's degree. Athletic training bachelor's programs have been eliminated and replaced with these new programs. While there is hope that the creation of these programs will help the athletic training field, there are still many doubts about the success and long-term impacts of this change (Pitney, 2012). Many of these programs would be starting during midst of the COVID-19 pandemic. Athletic trainers felt pushed to their limits before COVID, so can the increase pressure of a world pandemic bring forth much needed change?

Purpose of The Study

The purpose of this study is to see how COVID-19 impacted athletic trainers within the UNC System and the ways that they are adapting and changing to continue providing care for their athletes.

Research Questions:

1. How have new regulations from the State of North Carolina, the NCAA, athletic conferences, and individual schools within the UNC System brought on because of COVID-19 impacted athletic trainers within the UNC System?
2. How have budget cuts due to COVID-19 impacted athletic trainers within the UNC System?
3. What changes have athletic trainers within the UNC System made to adapt to the changes brought on by the COVID-19 pandemic?

Methodology

This study used survey instruments and interviews to collect quantitative and qualitative data. The survey and interview questions are included in appendix. The collection of qualitative data and surveys have been used in research on the athletic training career (Mazerolle, 2012; Bowman, 2015). Surveys allow for the collection of data that allow for an understanding of a population (Turocy, 2002). The mixed method research analysis was used in this study. The mixed method design allows qualitative and quantitative data to be used together to make arcuate comparisons among data (Wisdom & Creswell, 2013).

Participants

This study included 25 participants from 12 different universities. Figure 1 show the number of participants that completed the survey from each university. The participants from this study came from 12 of the 15 UNC-System schools. These schools ranged from Large Division 1 programs to smaller division 2 programs. This wide range of schools gives this study a better understanding of how the whole UNC-System was impacted as opposed to only a few schools. Figure 2 shows the number of each participants from each conference level that this study used. Of the 25 participants that completed the survey, 11 were from Group of 5 Schools, five were from Power 5 Schools, nine were from other schools, and 5 were from Power 5 schools. This range would allow this study to see if the impacts on athletic trainers were different depending on what conference level the athletic trainer came from. There were nine participants from schools who played all their fall sports, nine participants from schools that played football only and seven participants from schools that played no sports in the fall. Participants came from a wide range of sports including but not limited to, football, cheer and dance, volleyball, and soccer.

Data Collection

Using staff directories from each institution's athletic website, an email list of athletic trainers of

the UNC System was made to participate in this research's survey. Recruitment emails were sent to each potential participant to inform them about the study. Emails included the purpose and procedures of the study, a consent form, and the survey. Surveys were collected using the Qualtrics survey software. The survey was split into three sections: how the athletic trainers felt about their career at the beginning of the 2019 school year, how COVID-19 has impacted them in their work place, and how they the athletic trainers feel about their careers in the Fall of 2020. All three sections. included a series of statements in which participants would respond to a Likert Scale whether they strongly agree, agree, have no opinion, disagree, or strongly disagree with each statement. These questions purposed would allow the researcher to ascertain how the participants were affected by each category. Each section also had at least two short answer questions for the athletic trainers to give more specific answers about how they had been impacted and how they adjusted their services. This survey collected quantitative data which allowed for a better understanding of how the participants have dealt with the COVID-19 pandemic. Each participant was also given the opportunity to participate in an interview through a virtual format. These interviews allowed for more collection of qualitative data and allowed the athletic trainers to go into further detail about how the COVID-19 pandemic has affected them and the ways they are adjusting.

Data Analysis

Data from each section of the survey was organized by conference level and Fall sports return plan. Conference groups were categorized by into three groups: Power 5, Group of 5, and the remaining schools. This allow the use of cross tab analysis once the data. This would be used to compare how athletic trainers from different groups answered. The three categories within the Fall sports plan group are schools that played all their Fall sports, played football only, or played no Fall sports. This categorization allowed for a comparative analysis of answers between athletic trainers whose schools had different Fall sports plans, revealing if there is a correlation in their answers. The survey results were

Figure 1

Athletic Trainers Response by University

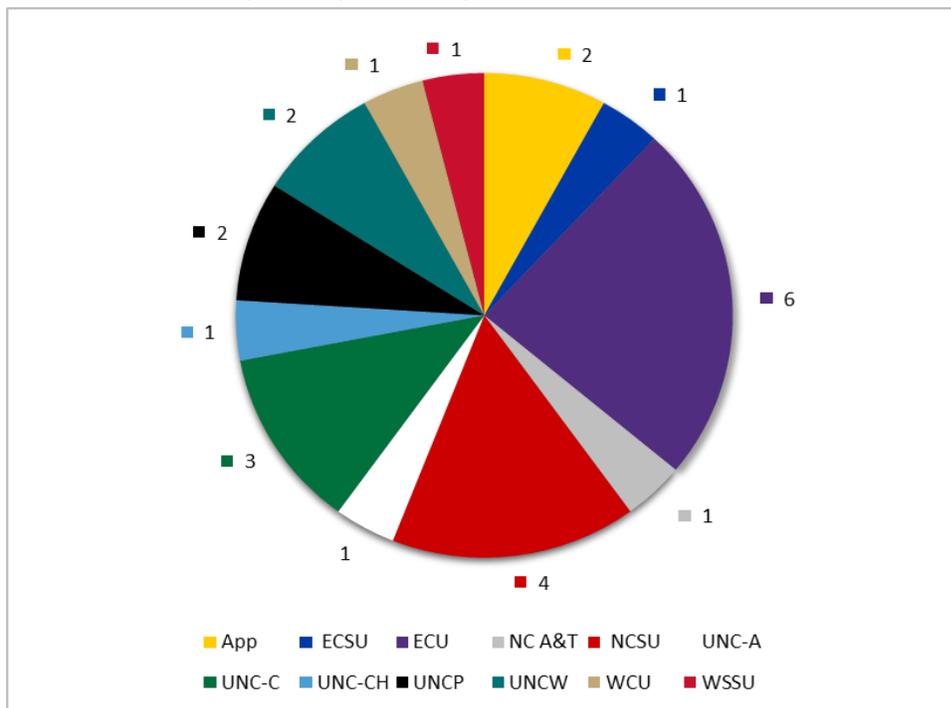
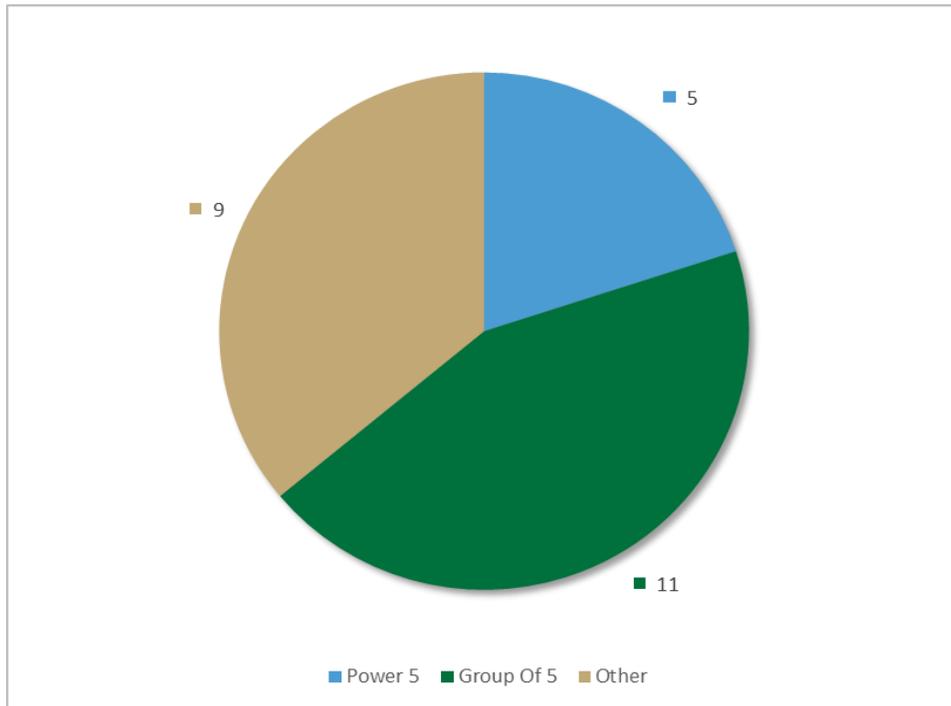


Figure 2

Number of Athletic Trainers From Each Conforce Level



calculated and put into an Excel table to allow for the comparison of answers for each question. The fixed effects mixed method analysis method was used to analyse the data. Quantitative data from the survey and qualitative data from the survey was analyzed to find correlation in answers. The only variables used in this reach was the conference level and return to fall sports plan the participant's school was classified as The table included the total answers from each question as well as the number of answers for each question for each categorized group. The tables were analyzed to see how participants from each group answered the survey compared to the total number of participants that gave the same answer to that question. The tables were also analyzed to determine correlations between different questions. Correlation would be used to determine if participants from different groups were impacted similarly by the COVID-19 Pandemic. This correlation could be used to determine if different group's plans caused their athletic trainers to have fewer negative impacts than others. The short answer and interview answers were then examined to find similarities or patterns in the participant's answers from different groups. This would allow this study to find a potential explanation of the results.

Results

This data from this study showed four main points of interest. These four points are increased workload, decrease value and support, impacts on mental health, and differentiating opinions based on an athletic trainer's school's athletic level. Tables 2 shows the percentages of athletic trainers impacted in each point of interest and table 3 shows the change of answers that athletic trainers had from part 1 to part 3 of the survey.

Increase Workload

The first impact that participants reported having due to COVID-19 was an increase in workload. When asked, 100% of participants reported having an increase workload caused by COVID and 76% reported working longer hours. These new duties included items like COVID testing, contact tracing, new

wellnesses checks and surveys, and checking on athletes in quarantine. These new duties and responsibilities not only added to the athletic trainer's job, but also took a priority over their other duties. 80% of participants reported that in the Fall of 2019 providing care, rehabilitation, injury prevention, and emergency services were the most important daily duty compared to only 24% that answer in the same manor about their most important daily duty in the Fall of 2020. COVID related duties were the most important daily task for 64% of participants. The increase in workload poses a challenge to athletic trainers' ability to manage multiple responsibilities and time management. The most impactful issue faced by the participants of this study in 2019 was time management with 48% of participants answering this. Athletic trainers who already felt that they were overworked and forced to spend too many hours at work have been asked to do even more during the pandemic. These new responsibilities and duties have cause 60% of participants to report that athletic trainers were most responsible for keeping teams safe during the pandemic. Only 24% of participants felt that players were the most responsible and 8% answered that administration was the most responsible.

Value and Support

While the number of responsibilities for athletic trainers increased, athletic trainers were also feeling less valued and supported. The number of participants that reported feeling like valued members of their school was 44% compared to 80% that answered the feeling valued in 2019. This support drop was also seen on a financial level with 52% percent of participants reporting taking a pay cut or a furlough and only 12% were content with the budget that their athletic department gave them compared to 72% in 2019. This lack of support both in value and finances paired increased hours and responsibilities has had a very negative impact on athletic trainers. Almost all participants reported being able to give proper care to their athletes in the fall of 2019. This dropped from 96% to 64% of participants who felt able to give proper care to their athletes during the fall of 2020. This also led to a drop in confidence that many athletic trainers had. Participants who felt confident in their ability

dropped from 84% to 64%. These issues have caused many to consider leaving their career or job. 64% of participants have had serious considerations of finding a new career outside the athletic training field while 60% have gave serious considerations of finding a new job with the field of athletic training. It's also important to note that this comes while 72% of participants felt successful in finding new ways to treat their athletes during the pandemic and only 8% disagreed to being successful. This feeling of success is higher than the both the percentage of athletic trainers who felt confident and those who felt they were giving proper care which was both at 64%. This success may also not have a large impact on retaining athletic trainers.

Mental Health/Safety

The pandemic caused an increase in concern surrounding the mental health of the athletes that participate in college sports. This concern was felt among athletic trainers with 96% of participants saying they are worried about the mental health of their athletes. This is a 48% increase from 2019. As one participant said, "there's a constant pull on the athlete [in] separate direction[s]". These pulls were more evident this year as there was much debate about whether athletes should have played sports or not. After months of lockdown, debate, unknowns, and constant change that college athletes have faced a strain on their mental health. It's also no surprise that mental health challenges and virus outbreaks have caused athletic trainers are more worried about the general safety of their athletes. Athletes had to be especially careful returning to activity after testing positive for COVID not just to prevent the virus from spreading, but also to ensure the athlete was healthy and fit to return to activity. As a part of the return to play protocol participants reported having to give their athletes EKGs and other physical test to ensure they were fit enough to participate. Even when athletes were able to return to full activity, many would be doing strenuous physical activity for the first time in weeks and would not be in the same physical state they were in prior to testing positive. This added not only to the physical harm that an athlete faced, but the mental stress an athlete faced as well. Not only did this return to play protocol

Table 2*Percentages of Impacts From COVID-19*

Statement	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
The Covid-19 Pandemic has caused my responsibilities to increase	84%	16%	0%	0%	0%
The Covid-19 Pandemic has caused me to work longer hours	60%	16%	16%	8%	0%
The Covid-19 Pandemic has caused me to take a pay cut/furlough	48%	4%	8%	12%	28%
The Covid-19 Pandemic has caused me to have serious considerations about finding a new career outside of the athletic training field	40%	24%	0%	28%	8%
The Covid-19 Pandemic has caused me to have serious considerations about finding a new job but still within the athletic training field	32%	24%	8%	20%	16%
I have been successful at finding new ways to provide care for my athletes	8%	64%	20%	8%	0%

add to the responsibilities of athletic trainers, but the possible stress it could cause an athlete was a new concern that athletic trainers need to monitor as they provided care for their athletes. It also should be noted that there was a great increase in worry about an athletic trainer's personal safety during the pandemic. As this study showed earlier, athletic trainers were main coordinators when it came to dealing with COVID-19. They were not only treating athletes every day, but also testing them for COVID, doing checkups on those in quarantine, sometimes delivering meals, and post evaluations. This put athletic trainers at the greatest risk for infection. This risk of infection caused an increase in athletic trainers' safety concerns for themselves. 64% of athletic trainers felt worried about their own safety in 2020 compared to only 12% worried about their safety one year before. This increase workload and lack of support has also had a negative impact on the mental health on the athletic trainers treating these athletes. When asked about the future impact athletic training will have of the mental health of athletes, participants also stated the mental health strain has impacted athletic trainers just as seriously.

Table 3*Changes In Answers From 2019 To 2020*

Statement	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
Currently, I am given proper support from the athletic department.	-52%	+0%	+8%	+32%	+12%
Currently, I am content with the budget that the school's athletic department allocated.	-28%	-32%	+24%	+8%	+24%
Currently, I am worried about the mental health of the athletes under my care.	+36%	+12%	-20%	-24%	-4%
Currently, I am concerned about the risk of the athletes under my care participating in their sport.	+20%	+36%	-12%	-32%	-8%
Currently, I feel confident about my ability to do my job as an athletic trainer.	-36%	+16%	+8%	+8%	+4%
Currently, I feel a valued member of my school/team	-16%	-20%	+8%	+20%	+8%
Currently, I am worried about my own safety while working with my team	+24%	+28%	+4%	-24%	-32%
Currently, I am able to give my athletes the proper care needed.	-64%	+36%	+8%	+20%	+4%

*2020 Percentages were subtracted from 2019 Percentages to determine values.

Varying Answers Based on Different Schools

The last major theme this study uncovered is how participants answers varied depending on if a participant's school was in the Power 5, Group of 5, or other school category. Participants from Power 5 and Group of 5 schools tended to answer similar to each other. This was true expect when asked about if the pandemic had caused a participant to have serious consideration about leaving the athletic training field. Participants from Power 5 schools only had 40% agree to having serious considerations about leaving compared to 82% that agreed from Group of 5 schools. 60% of participants from Power 5 schools agreed to having serious considerations about finding a new job within the athletic training field

Figure 3

Who is Most Responsible for Keeping Team Safe During COVID-19?

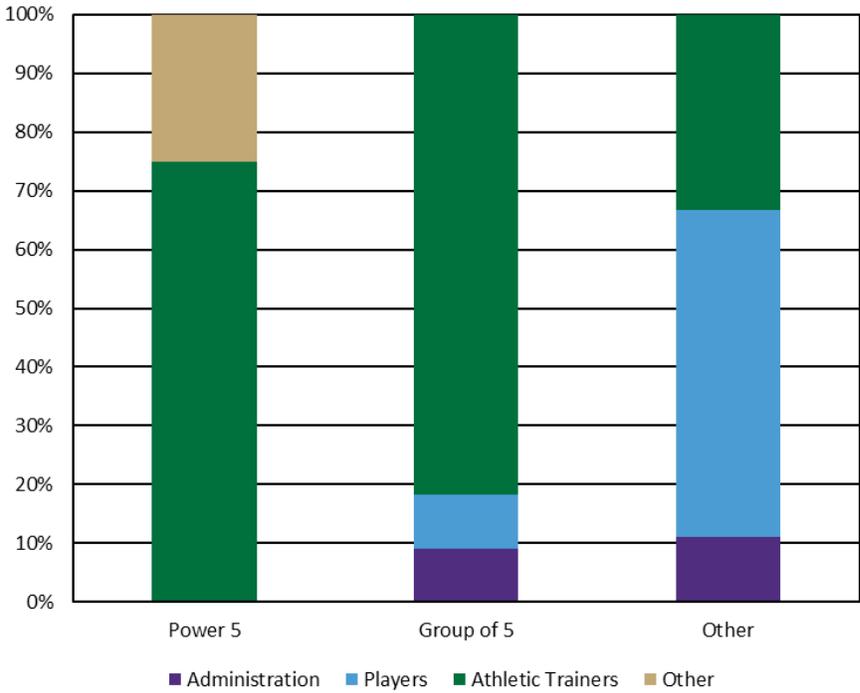
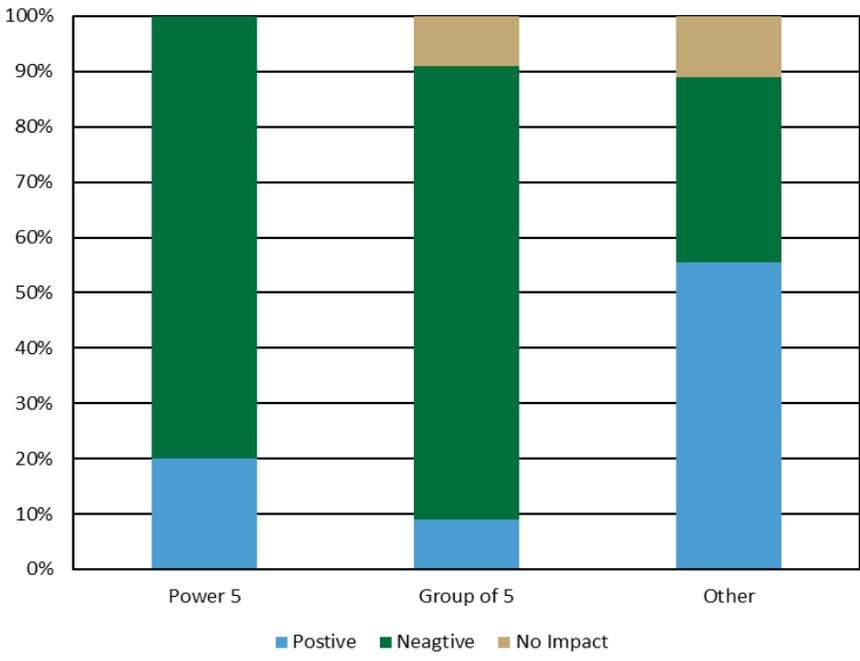


Figure 4

Participants Feelings of Future Impact That COVID-19 Will Have On Athletic Training



compared to 72% from Group of 5 schools. Participants from other schools, schools that did not fall into either Power 5 or Group of 5 categories, answers varied from the rest of the participants. Only this group of schools had participants answer that they did not have an increase in hours with 22% of participants that fall into this category did not have increase in hours. Participants from this group were also less likely to have a payout or furlough with only 22% having one compared to 60% of Power 5 participants and 73% of Group of 5 participants. Power 5 and Group of 5 participants also reported more often that athletic trainers were the most responsible for keeping teams safe during the pandemic, 60% Power 5, 82% Group of 5 compared to only 33% of participants from other schools. Most participants from other schools answered that players were the most responsible for keeping teams safe during the pandemic. Finally, when asked about the future impacts COVID-19 will have on the athletic training field, participants from Power 5 and Group of 5 schools were less optimistic with only less than 20% answering it will be positive compared to 56% of athletic trainers from other schools who feel the pandemic will have a positive impact on the future of athletic training.

Discussion

Current Ways to Support Athletic Trainers During Pandemic

Athletic trainers of the UNC System have faced many challenges and issues during the COVID-19 outbreak. While they have been successful in keeping college athletes safe, it has come at a high cost. Many have been asked to work longer hours and cover many duties with less support from their administration. This has caused many to not only feel undervalued, but also caused many to want to leave the career or job. Recommendations for supporting athletic trainers include ensuring a proper sports medicine budget, allowing athletic trainers to weigh in on important decisions, and making sure athletic trainers are having a balanced load. Many of the participants wished for more support from their departments. Many participants indicated that they felt they were the main staff that had to fill many of the new COVID policies. Participants that felt their departments and administration that listened

and worked with them also had a more positive feelings and thoughts on how well they were supported. One participant noted how from the beginning her administration made athletic trainers' part of the discussion about their Fall sports plan. She noted "...especially during the summer when it would be athletic trainers admin and coaches that would all sit down in a meeting at the same time together to kind of brainstorm how to keep practices and things safe.". She had a more positive opinion not only of the current state of athletic training, but also for the future. For many of the athletic trainers that felt their administration was just giving them new policies and expecting them to follow them with little input were more likely to express negative opinions. It is recommended that further support of athletic trainers should include an assessment of roles and responsibilities. Many participants biggest frustration from the pandemic was being expected to do complete a growing list of responsibilities while taking pay cuts and furloughs. Athletic trainers felt their efforts were not worth what they were getting paid even though they were the main force behind keeping athletes safe. Athletic trainers were expected to do more with in less time, lower budgets and for less. Participants also expressed wishing for a clear path of communications to help them. This would help teams, athletic trainers, and administration have a better understanding of the effects the pandemic is having. There should also be a more balance load of responsibility of response to future emergencies. Athletic trainers cannot be expected to carry all the responsibility of keeping their athletes safe especially if being forced to take many furloughs days. The more teams and players an athletic trainer cover the extra support will be needed. Lastly, athletic trainers need more clear plans. Participants express concern that plans from the NCAA and university division were implemented without discussion, training or support. It is recommended that to fully support athletic trainers, institutions need to ensure athletic trainers are part of the discussion and planning. Protocols and a scope of work should be incorporated. Participants were understanding of the situation and strain placed on their administrations, but also express that not enough progress was made to give them proper support. It's important to note that every athletic department's needs and

situation are different, and its response must be different to help solve their unique issues. Because of this, administrations need to talk to their athletic training staff to ensure that policies are effective and worth the extra time and effort required to enforce them. This will help athletic training staff feel supported and student athletes safe.

Post COVID Impacts

As universities are making plans for the return of athletic programs ends, there are still many issues that will need to be addressed. Mental health is one of these issues. Athletic departments ensure the state of mental health of their athletes is addressed. With 48% of participants concerned about the mental health of the athletes under their care shows there must be more resources to support their athletes. Athletic trainers should be aware of not only the signs of mental health issues but also their roles in helping. Dr. Goodman describes the role of athletic trainers and mental health as “We [athletic trainers] deal with injuries AND illness, including recognizing, referring, and facilitating treatment for depression/anxiety, disordered eating, and we are often the first person the athlete/patient approaches, or the first person to notice problems/issues.”. However, athletic trainers are not the only members on an athletic team that have a responsibility. Coaches, players and support staff should all be aware of signs of mental health issues and understand they have an important role in this process. Athletic departments should ensure their staff is educated and informed on these this issue so they are able to fulfill their responsibility should they need to. This responsibility does not just apply to staff looking for signs in athletes, but also in staff members. Athletic trainers, like all staff that work in athletics, can face long hours difficult responsibilities causing a high attrition rate. This makes the concept of self-care very important in this field. However, as a participant said, that many athletic trainers don’t get to do. While athletic trainers need to ensure they are taking care of themselves, athletic departments should also ensure that they are helping support their athletic trainers.

Athletic trainers should also consider continuing some changes brought on to athletic training

programs during the pandemic to help ensure efficiency in the athletic training department. One athletic trainer said she feels that athletic trainers should look at encouraging their athletes to make appointments for time they receive care to help athletic trainers balance their workday. It was also brought up that continuing wellness surveys will help athletic trainers keep track of their athletes. These can help athletic trainers have a better awareness of physical and mental concerns that athletes are facing and how they are changing over time. This will be very beneficial when athletes are away from campus and athletic trainers are unable to see and talk to their athletes.

It is also important that athletic departments have clear policies and protocols for mass emergencies situations. The COVID-19 pandemic caught much of the world off guard and many actions were taken only after the impacts were already felt. Athletic departments should ensure they have plans in place for emergencies that happen in their events that could cause harm to players, staff, and fans alike. COVID-19 has shown the impacts and stress caused by unexpected events when there is little to no plan in place on how to handle it. There are emergency situations that could be faced by athletic departments such as collapse bleachers, unexpected storms, and attacks on athletic events. While it is hoped that these response plans will never be used, these events do happen. As this study's data shows, an incomplete or inefficient response plan causes frustrations and lowers the efficiency of the response in providing care in emergency situations. While hospitals and trauma centers will provide care to those injured, athletic staff will need to act with clear roles to help depending on the situation.

Limitations of The Study

This limitations of this are the number participants, timing if study and unclear possible causes of varying answers. This study only included 25 athletic trainers from the UNC-System. This is only 20% of the total number of athletic trainers that are employed at UNC-System schools. The data could change with the increase of more athletic trainers. Another limitation is due to the time the surveys were sent to the participants. Only 5 UNC System School's had at least one Fall sports playing with two

of those schools only playing football. Many athletic trainers had not faced the sports season with their teams when this survey was sent out. Athletic trainers not in sports seasons could only speculate about what they thought they would be doing once their sports teams resume play. It should be noted however, that there was a concern from athletic trainers who schools pushed all Fall sports to spring about how they would balance between all the teams' events. Lastly, it is unclear how different fall sports plans may have impacted an athletic trainer's response. The category of schools that played all fall sports included all Power 5 schools and one Group of 5 school. Only Group of 5 schools decided to play football only and schools that played no fall sports all fit into the other category of conference level. Because of this, it is unclear if an athletic trainer was impacted by COVID in a certain way because they fit into the Power 5 group or the played all fall sports group. This makes it unclear how athletic trainers were impacted in these different grouping systems.

Conclusion

COVID-19 has a major impact on the daily responsibilities and duties faced by athletic trainers of the UNC-System. This caused many athletic trainers to work longer hours while facing furloughs and pay cuts. Athletic trainers also became increasingly concerned about the mental health of both their athletes and coworkers due to the increase stress that the COVID-19 Pandemic caused. This has caused many to consider looking for new employment. Athletic trainers can be further supported by their departments by making sure their voices and concerns are heard and part of the decision-making processes. Overall, athletic trainers are positive that they have been able to provide proper care when needed and continue to adjust to new changes brought on by the pandemic. Due to the COVID-19 pandemic, the study has shed light on the challenges athletic trainers face in the workplace and the importance of including them in future discussions to develop policies and protocols that will keep athletes safe. Issues such as work life balance, pay, and mental health have been highlighted by the pandemic and changes should. This study demonstrates that further research should be conducted to better understand how COVID-19 has

impacted athletic trainers around the world as well as studies aimed to identifying stresses leading to mental health concerns of both athletics and staff.

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Flyer

Appendix

Appendix 1. Survey

Q1. Which UNC System School are you affiliated with.

Q2. Select how you feel about the following statements.

At The Start Of The 2019 School Year I was able to give my athletes the proper care needed.

At The Start Of The 2019 School Year I was given proper support from the athletic department.

At The Start Of The 2019 School Year I was content with the budget that the school's athletic department allocated.

At The Start Of The 2019 School Year I was worried about the mental health of the athletes under my care.

At The Start Of The 2019 School Year I was concerned about the risk of the athletes under my care participating in their sport.

At The Start Of The 2019 School Year I was felt confident about my ability to do my job as an athletic trainer.

At The Start Of The 2019 School Year I was a valued member of my school/team

At The Start Of The 2019 School Year I was worried about my own safety while working with my team.

Q3. At the start of the 2019 school year, what was your most important daily task as an athletic trainer?

Q4. At the start of the 2019 school year, what did you believe to be the biggest challenge of being an athletic trainer?

Q.5 Select how you feel about the following statements.

The Covid-19 Pandemic has caused my responsibilities to increase.

The Covid-19 Pandemic has caused me to work longer hours.

The Covid-19 Pandemic has caused me to take a pay cut/furlough.

The Covid-19 Pandemic has caused me to find new ways to care for my athletes.

The Covid-19 Pandemic has caused me to have serious considerations about finding a new career outside of the athletic training field.

The Covid-19 Pandemic has caused me to have serious considerations about finding a new job but still within the athletic training field.

I have been successful at finding new ways to provide care for my athletes.

Q6. Who is most responsible in keeping the team safe during the Covid-19 Pandemic

Q7. If any, what new responsibilities have been added to your duties as athletic trainer due to the COVID-19 Pandemic?

Q8. If any, what are successful changes you made to help care for your athletes during the COVID-19

Pandemic?

Q9. Do you think Covid-19 will have a positive or negative impact on the athletic training field in the years to come?

Q10. Select how you feel about the following statements.

Currently, I am able to give my athletes the proper care needed.

Currently, I am given proper support from the athletic department.

Currently, I am content with the budget that the school's athletic department allocated.

Currently, I am worried about the mental health of the athletes under my care.

Currently, I am concerned about the risk of the athletes under my care participating in their sport.

Currently, I feel confident about my ability to do my job as an athletic trainer.

Currently, I feel a valued member of my school/team.

Currently, I am worried about my own safety while working with my team.

Q 11. What is your most important daily task as an athletic trainer this year?

Q 12. As an athletic trainer, what do you wish you would have known at the start of the pandemic?

Q 13. Would you be interested in completing a virtual interview?

Appendix 2. Interview Guide

Hi "XX", My name is "XX", I will be completing your interview about your perceptions of how COVID-19 impacted athletic trainers roles and responsibilities. Is now still an ok time to talk?

(if yes, proceed)

Thank you for being willing to do an interview with us. Before we get started, I wanted to pause and see if you had any questions about the project, why we are doing these interviews, or what we will do with the information you provide today?

Ok, I also wanted to check to make sure you completed the consent form when you did the online survey- we have down that you did, but I wanted to make sure you understand the project and that I will be recording our session today- with your permission.

(if ok/yes, agree to proceed, move to interview questions)

1. What changes have been implemented to keep athletes and teams safe during the Covid-19 pandemic?
 - a. Who implemented these changes? Why?
 - i. You
 - ii. Coach
 - iii. Athletic Director
 - iv. Administration/Institution
 - v. NATA (National Athletic Trainers Association)

2. Have there been any challenges to providing the proper treatment to your athletes during this pandemic? If so what?
3. How has the return to play protocol impact athletic trainers?
4. What regulations have changed due to COVID-19?
5. What part of being an athletic trainer is hardest during the pandemic? (diagnosing, rehab, preventive care, getting athletes to specialized care, Etc.)
6. How have you adjusted services to your athletes through virtual formats, if at all?
7. How has furloughs or budget cuts impacted you? If at all?
8. What are your responsibilities as athletic trainer to ensure that athletes, coaches, staff, and fans are kept safe? (games, traveling, and events)
9. Have any issues related to athletic training brought about by the pandemic that you believe should continue to be investigated, even after the pandemic ends?
10. What actions taken were not successful during Covid-19 pandemic?
11. What new information should be shared with athletic training students?
12. Please elaborate on how you believe COVID-19 has impacted the athletic training field.
 - a. Positive/negative
 - b. Duties of an athletic trainer
 - c. The way athletic trainers are viewed by others
 - d. Mental health and well-being
13. Is there anything you would like to add?

Thank you for your time.