



Impact of the COVID-19 Pandemic on Job Responsibilities of Athletic Trainers

Senior Project

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By

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Abstract

COVID-19 has significantly affected healthcare providers, such as athletic trainers (ATs), since its onset one year ago. Throughout the pandemic, ATs have worked on the frontlines of health care services, yet there are still those that fail to see the value of ATs. This purpose of this study was to determine how the pandemic impacted ATs' job status, settings, and responsibilities one year into the pandemic. Participants were recruited through social media to participate in a 14-question online survey that included demographics, Likert scale, and open-ended questions. 50% of participants that remained in their pre-COVID setting were forced to adjust to additional or different job responsibilities brought on by the pandemic, while the other 50% were forced to seek new or additional employment due to having experienced unpaid furlough, reduced work hours/time, or being laid off. These ATs reported transitioning to work in COVID clinics, hospitals/ERs, and wherever they were needed. Some ATs expressed serious concern for themselves mentally while still reporting feelings of appreciation of some of the effects of the pandemic. Despite mental/physical exhaustion, burnout, and uncertainty, most ATs in this study adapted well and were willing to adjust as needed to meet the needs of their patients. While playing a key role in the pandemic response, either by performing additional responsibilities required of them or utilizing their skills in other or additional settings, ATs have maintained flexibility and will continue to do so.

The Impact of COVID-19 on the Role of Athletic Trainers

An athletic trainer (AT) is a “highly qualified, multi-skilled health care professional who renders 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” (National Athletic Training Association [NATA], para. 1). As defined by the Board of Certification Practice Analysis (2015), they specialize in 5 domains: injury and illness prevention and wellness promotion, emergent acute care, examination and clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical condition, and healthcare administration (Henderson, 2015).

In order to become an athletic trainer, students must graduate from a Commission on Accreditation of Athletic Training Education (CAATE) accredited program (Board of Certification [BOC], 2021). Previously, the minimum entry point into the profession of athletic training was a baccalaureate degree; however, in 2015, the Athletic Training Strategic Alliance determined that the minimum degree should be at the master's level (NATA, 2021). All currently accredited programs must transition to the master's level and baccalaureate programs are no longer able to admit students after 2022 (Strategic Alliance Degree Statement, 2015). Upon completion of a CAATE-accredited athletic training education program, students become eligible for national certification by successfully completing the BOC examination (BOC, 2021). The Practice Analysis document outlines the knowledge and skills an entry-level professional must exhibit, and it is the blueprint for the BOC

examination degree. The educational competencies taught in athletic training programs are based on this document.

After becoming certified, the AT must apply for licensure within the state in which they wish to practice, as each state's licensure laws may vary. It is important for the AT to do so, as the licensure laws is what defines the scope of practice which the AT must follow. This means that the duties that can be performed by ATs may be slightly different depending on the state in which they are practicing; however, the core competencies remain the same. Like many other professionals, ATs are required to complete continuing education courses every two years (BOC, 2021). This requirement ensures the AT stays up to date on best practices for the benefit of their patients.

Through the years, ATs have continued to expand their knowledge and skills to provide the best care possible to their patients. Some of the newer skills include suturing, IV administration, and casting (CAATE, 2018). However, ATs have also continued to struggle for their identity as healthcare providers. Many parents, coaches, athletic directors, administrators, and emergency medical services personnel still that do not understand the roles and responsibilities of ATs (Clines, et al., 2017; Diakogeorgiou, et al., 2017; Felling, 2003; Jaquith & Hanley, 2018; Mensch, et al., 2005, Weitzel, et al., 2015). ATs offer skills that can be utilized in many different settings such as physician and orthopedic offices, secondary, collegiate, and professional level athletics, industrial corporations, and even military bases. ATs' value and adaptability has become even more apparent with the rise of

COVID-19 over the past year, as they have taken on even more responsibilities during this time (Winkelmann & Games, 2021).

The Corona 2 virus, a severe acute respiratory syndrome, has affected the United States since the first confirmed case on January 21, 2020 (Snohomish Health District, 2020, January 21). Since then, according to the Center for Disease Control and Prevention (CDC), not only has there been 31,306,928 confirmed cases, but there have also been 562,296 deaths from the pandemic in the United States alone (CDC, 2021). Because of what seemed to be a rapidly increasing number of cases and mortality rates, most states instituted a mandatory cessation of all activity that was not considered essential to the state's function (COVID-19 Orders and Directives, 2021). As athletics were not considered essential, early in the pandemic, all athletic events (secondary, collegiate, and professional), as well as certain areas of medical facilities were terminated. The cessation of activities had a huge impact on ATs' employment. A recent study by Winkelmann and Games (2021) looked at the impact of COVID-19 on the employment status, job duties, and resiliency of athletic trainers since the onset of the pandemic. They found that 85% of the participants were still employed, though their duties had changed; only 10% reported no changes. Of the 85% who were still employed in some form, whether working remotely or in person, 84.6% believed that they would not only maintain this status, but also return to perform their previous tasks following the termination of COVID-19. (Winkelmann & Games, 2021)

Throughout this pandemic, many ATs were forced to seek other employment, due to being furloughed or having their job terminated. Others were redistributed

within their employment settings, to help with the COVID-19 response since athletics were shut down, which in turn, forced them to adapt to different responsibilities than their current job required. Winkelmann and Games (2021) recognized that ATs would need to demonstrate resiliency to face all these changes. They identified that there were concerns among their participants about the effect of the pandemic regarding their financial status (some ATs were forced to receive a decrease in pay in lieu of losing their job) and their emotional status as the pandemic continued. However, even though ATs had concerns for their own future, they still managed to not only find found ways to continue the care they were already providing, but were also able to complete new tasks, such as screening, contact tracing, and testing that are necessary for COVID-19. (Winkelmann & Games, 2021)

Due to the pandemic, many secondary schools and colleges/universities started the school year remotely with no athletics or significantly reduced athletic opportunities. The programs that could participate required significant monitoring of their athletes (NCAA, 2020). In addition, many clinics and physician offices continued to operate under restrictions. Therefore, the purpose of this study was to determine how the pandemic has impacted ATs' job status, settings, and responsibilities one year into the pandemic, and how this compares to the Winkelmann and Games (2021) study which was performed early into the COVID-19 pandemic. Through their study, they discovered that "ATs... demonstrated the ability to adapt and, in many cases, add value to the health care system during these unprecedented times in [the] profession" (Winkelmann & Games, 2021). The

intention is to use the results of our study to further promote the versatility and adaptability of ATs as healthcare providers.

Methods

A cross-sectional research design was used to determine the impact of the COVID-19 pandemic on the job settings and responsibilities of athletic trainers (ATs). A survey was developed over a 1-month period. Once created, the survey was submitted to the UNCP Institutional Review Board for approval. Upon approval, the survey was administered online through Qualtrics and pilot tested with several ATs to determine completion time and functionality of the questions. Following the pilot test, the survey was posted Feb. 25, 2021 and was available through March 30, 2021. After the data collection period, the results were analyzed and organized to be presented.

Participants

After acquiring Institutional Review Board approval, potential participants were recruited via snowball sampling through social media (Facebook, Twitter) using a standard script with a link to the survey. To be included, participants were required to be credentialed ATs who were working as an AT as of March 2020, and over the age of 18. A total number of 106 participants were recruited and consented to the survey. However, two were excluded because they were not credentialed and nine were excluded for failure to complete at least 40% of the survey. Therefore, the final sample size was 95. For more detailed demographic data, refer to Appendix A.

Measures

Survey. A 14-question, modified version of the instrument created by Winkelmann and Games (2021) was created (Appendix B). We asked 3 questions regarding the participants' demographics, 7 questions inquiring about their job responsibilities prior to and during the onset of the COVID-19 pandemic, 3 open ended questions asking how COVID-19 has affected them both professionally and personally and how they feel they have adapted to this fact, and 1 question inquiring about how likely they felt their job would return to pre-COVID status. The survey was created, administered, stored, and assessed through Qualtrics (Qualtrics, Provo: UT).

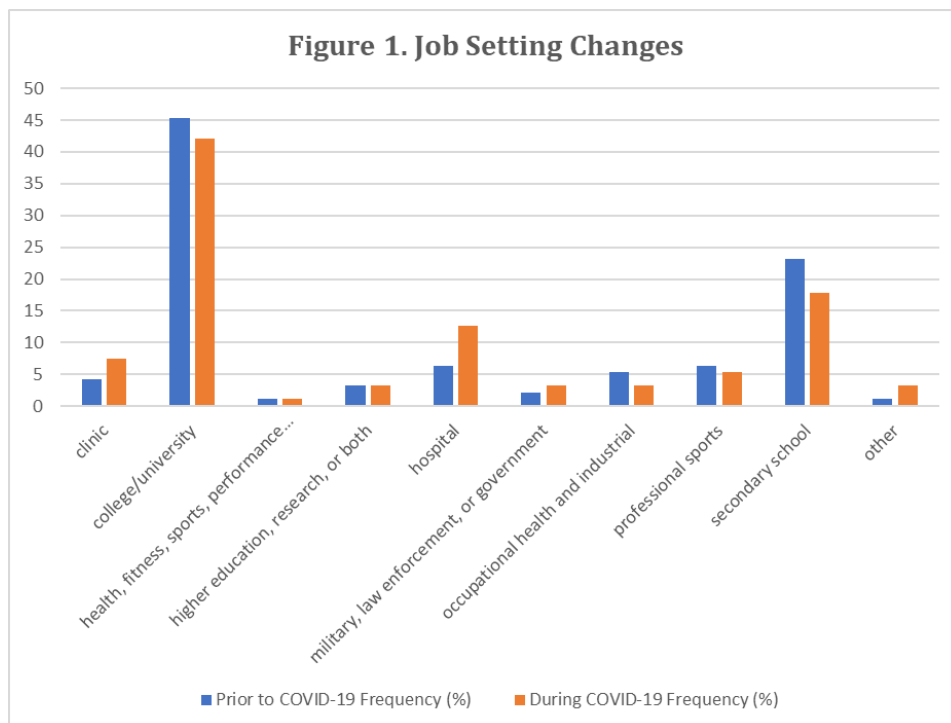
Data Analysis

The survey results were downloaded and analyzed in Microsoft SPSS (Version 26.0). All responses were anonymous, and no identifiable information was asked or collected. Descriptive statistics were used for the demographic information and comparison of job settings prior to and during COVID-19. Chi Square analysis with Phi coefficient and Cramer's V were utilized to compare job status and setting prior to the pandemic. The qualitative data was then divided into categories using codes from the Winkelmann and Games (2021) study in addition to codes that we created. These codes were then separated into parent categories to demonstrate the themes. The data for the open-ended questions was analyzed in Qualtrics using Text IQ (Qualtrics, Provo: UT).

Results

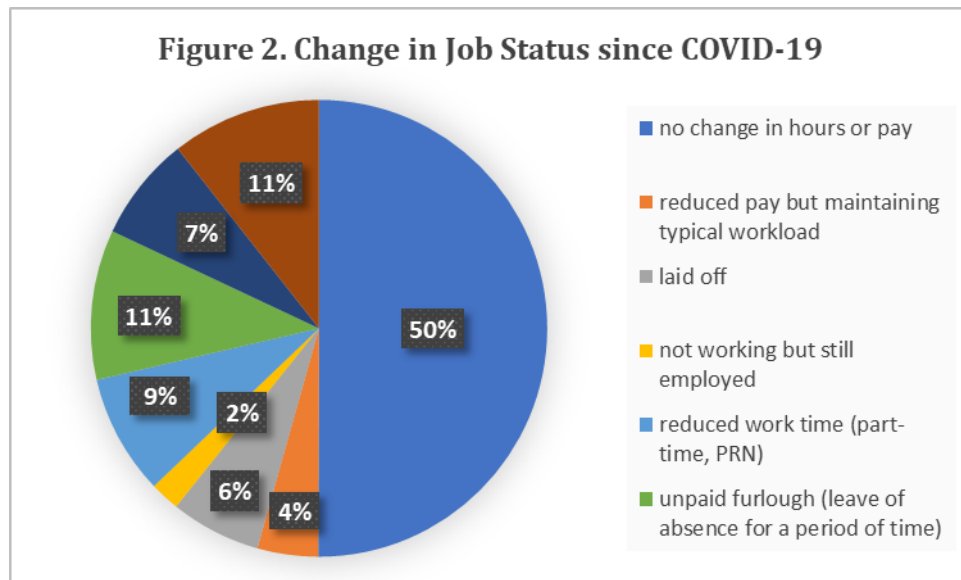
Job Setting

Prior to the pandemic, the setting in which the participants worked did vary, though 45.3% of these individuals held ATs positions at the collegiate/university level. However, this number decreased to 42.1% after the onset of COVID-19. Two of these participants found positions at a clinic, two sought employment at a hospital, and at least one filled a position at a secondary school. Prior to the onset of COVID-19, 23.2% of the participants were ATs at secondary schools. Despite the fact that some ATs left their previous settings to work at a secondary school, the overall number decreased to 17.9% during the pandemic. Of the participants who were included in the study, only 6.3% were employed at a hospital. After the onset of COVID-19, however, this number seemed to have a significant increase, as 12.6% worked in a hospital setting. Figure 1. provides a more detailed description of how the pandemic impacted the settings in which these ATs worked.



Job Status

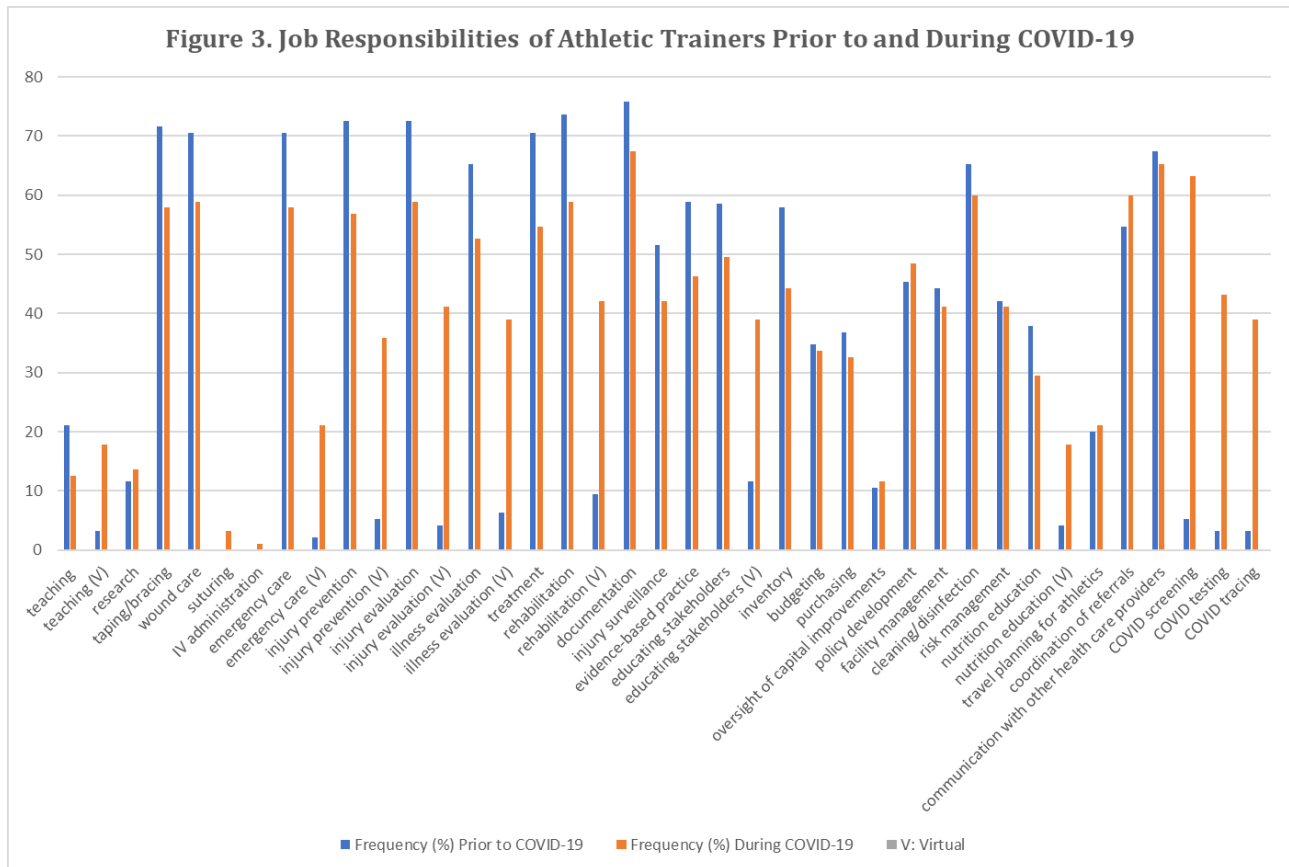
Through the continuation of the pandemic, only half of the participants (50%) were actually able to continue working as they were before the onset of COVID-19 with no change in hours or pay. In contrast, participants were equally likely (10.6% for each) to be forced to begin working remotely from home with no changes in job status, including pay or hours, or experience an unpaid furlough. The furlough was defined as a leave of absence for a period of time. A total of 8.5% of participants experienced a reduction in work time/hours and 6.4% were initially laid off. Only 4.3% of ATs continued to work the same number of hours/workload but took a decrease in compensation. Figure 2 contains the frequencies related to the participants' change in job status since the onset of the pandemic.



Job Responsibilities

Prior to the onset of COVID-19 well over half (71.6%) of the ATs surveyed were performing taping and bracing. However, with the continuation of the pandemic, this number decreased to 57.9%. Again, before COVID-19, a high percentage of these ATs (70.5%) were executing wound care, but only 58.9% of participants reported performing wound care during the pandemic. In what seems to be a similar pattern, the data showed that a total of 70.5% of the ATs were performing in person immediate/emergency care, with only 2.1% doing this virtually, but, because of the new regulations brought on by COVID-19, the percentage of ATs performing immediate/emergency care decreased to 57.9%. Conversely, the percentage of participants who performed these tasks virtually exceeded to a total of 21.1%. Following this same pattern, 72.6% of the athletic trainers reported they were conducting in person injury evaluation, and only 4.2% were doing this task. Since the onset of the pandemic in person injury evaluation dropped to 58.9% and virtual evaluations rose to 41.1%. Again, it was discovered that before the pandemic, over half of the ATs (65.3%) were conducting in person illness evaluations and only 6.3% were performing virtual ones. Not surprisingly, these number changed to 52.6% of ATs conducting illness evaluations in person and 38.9% performing them virtually. This pattern was again redisplayed with 73.7% (in person) and 9.5% (virtually) of the participants managing rehabilitation prior to the pandemic and 58.9% (in person), 42.1% (virtually) were still conducting rehabilitation sessions. Understandably, upon examination, a total of 70.5% of ATs were performing treatments on patients before the onset of COVID-19, but through

the duration, there were just 54.7% conducting treatments. Not surprisingly however, the process of budgeting (34.7%) and purchasing (36.8%) prior to the pandemic only suffered a minimal drop since the onset of COVID-19; these numbers being 33.7% and 32.6%. Lastly, there was a significant increase in COVID-19 related duties that were being performed by the ATs. These duties included screening, testing, and contact tracing. Before COVID-19 these responsibilities were being performed by 5.3%, 3.2%, and 3.2% of those who participated in the study. After the onset of the pandemic there was a total of 63.2% performing screening, 43.2% performing testing, and 38.9 conducting contact tracing. For additional percentage changes of the responsibilities of the ATs before and during the onset of COVID-19, refer to Figure 3.



Athletic Trainers' Perceptions

Upon examination of the responses, it was evident that most of the ATs continued to work, whether it be their current jobs at the time, or a new job they were forced to find as a result of COVID-19; either way, ATs were forced to learn and perform new duties. However, these responsibilities were not limited to COVID-19 testing, screening, and contact tracing; it was reported by one participant that they “went from writing policies for return to sport to (writing) a lot of COVID-19 related policies.” Another participant reported that they “assisted with any needs in the ER and ICU.” Some ATs even reported working in vaccine clinics and any hospitals or offices that needed it. When asked about how the pandemic has affected them personally or professionally, several participants described feelings of “burnout” or “exhaustion” in response to the extra responsibilities brought on by COVID-19. One even stated they even “considered leaving the profession.” Others expressed concerns of job security.

However, there were also those that stated there were positive effects of the pandemic on their lives. One participant stated that COVID-19 “gave (them) more insight into having a work/life balance.” Another stated the pandemic “added more tools and experiences to (their) resume.” Some it seemed were even grateful for the consequences of the virus; they stated, “quarantine provided a much-needed break and pause from the daily crazy.”

Lastly, the participants were asked how they feel they have adjusted as an AT since the onset of the pandemic. The responses to this question were mixed. There were those that seemed to struggle more than others. For example, one participant

reported, “feeling far more cynical than (they were) a year ago.” Another stated feeling that they were unable to “disengage from (their) job” since they were working remotely. One even mentioned that they were “surviving, not thriving.”

However, some ATs reported gaining professional strength and flexibility during COVID-19. It was also evident that there were those who seemed to experience a different outlook. One even reported that the pandemic has helped them realize just how versatile ATs are, and how they are not solely limited to the athletic setting. Another reported they “actually feel (their) patient care has [improved], in that (they) understand that (their) student athletes have been through a lot and (they) try and take this into consideration when working with them.”

Overall, it was evident that, due to COVID-19, most ATs seemed to have stronger awareness of the cleanliness and disinfection procedures of the facility in which they work. All responses can be reviewed in Appendix C.

Discussion

Similar to many other professions, athletic training was significantly impacted due to the effects of COVID-19. The pandemic led to 50% of our participants to seek new or additional employment due to having experienced unpaid furlough, reduced work hours/time, or being laid off. The 50% that remained in their pre-COVID setting were forced to adjust to additional or different job responsibilities brought on by the pandemic. ATs, though they did report a decrease in in-person sessions, were still performing their original responsibilities,

such as injury and illness evaluation, in addition to extra duties brought by COVID-19.

Like other healthcare providers, early during the pandemic, ATs were providing care virtually to accommodate the needs of patients and still follow state regulations brought on by the pandemic. However, during this time, they were also developing policies and procedures to allow for the continuation of the safety of their patients. Because of the mandatory cessation of activities, ATs were also utilizing their skills in other settings. Many reported helping in vaccine clinics performing testing, screening, and tracing, as well as in hospitals and ERs. Some even reported taking on tasks such as IV administration and suturing within these settings.

When states “reopened” and allowed for the reestablishment of athletics to occur, ATs again were on the frontlines performing COVID testing, screening, and tracing of their student athletes. When we asked how these ATs were personally and professionally affected many reported a lack of enthusiasm and feelings of extreme fatigue because of the additional responsibilities. There were those that expressed serious concern for themselves mentally and expressed concern for their financial/job stability. One even reported they were “surviving not thriving.” This result is consistent with a study observing the psychological effects of COVID-19 on healthcare workers. The authors reported that “anxiety and depression were experienced in 20% and 11%” of their participants” (Denning et al., 2021).

It did seem that COVID-19 affected ATs as healthcare providers, like many others who worked on the frontlines through the pandemic. In another study that

assessed the level of burnout among healthcare providers during the pandemic, it was also discovered that many of its participants described “high levels of burnout,” though the level seemed to vary depending on the site in which the provider worked (Jalili et al., 2021). They also discovered there was an increased risk of experiencing burnout if the healthcare provider was a younger, female with at least one child. This could explain why many of our participants reported similar feelings; over 50% of our participants were female.

However, there were responses that expressed feelings of appreciation of some of the effects of the pandemic. ATs reported having learned new skills in which they can utilize throughout the rest of their careers. Some stated learning better time management, and they even learned to be more understanding and have more patience with their patients. One even reported having a better appreciation for the profession of athletic training. This could suggest that, combined with the new standards included in their profession, ATs are even more valuable now than before the onset of COVID-19.

Limitations

While it seemed there was a similar pattern among the ATs who participated in the survey, the small number of respondents may have impacted the results. The survey may have also benefitted from an additional method of recruitment; some ATs may not be active on social media. It also could be noted that some ATs might have chosen not to participate in the study due to subject matter.

Conclusion

COVID-19 brought many challenges to a variety of healthcare providers, including ATs. However, despite mental/physical exhaustion, burnout, and uncertainty, most ATs in this study adapted well and were willing to adjust as needed to meet the needs of their patients. While playing a key role in the pandemic response, either by performing the additional responsibilities required of them or utilizing their skills in other or additional settings, ATs have maintained flexibility and will continue to do so.

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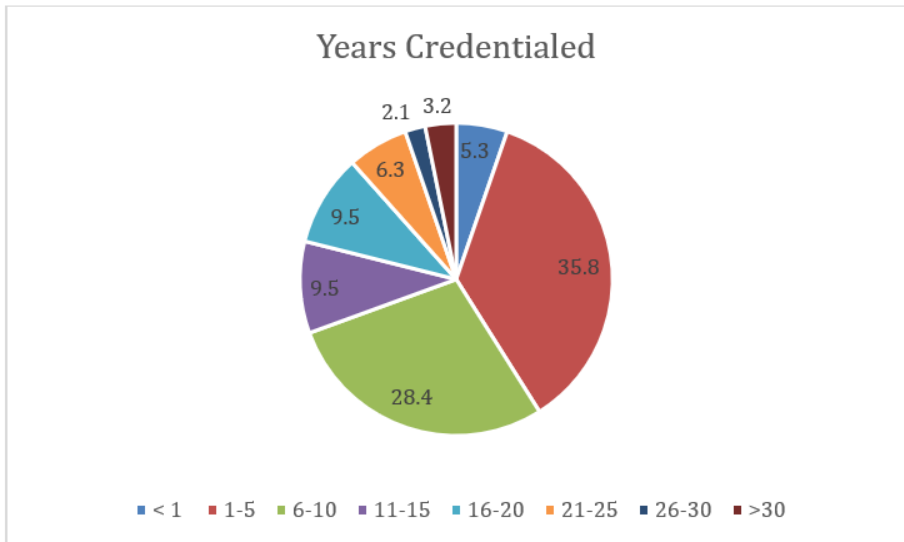
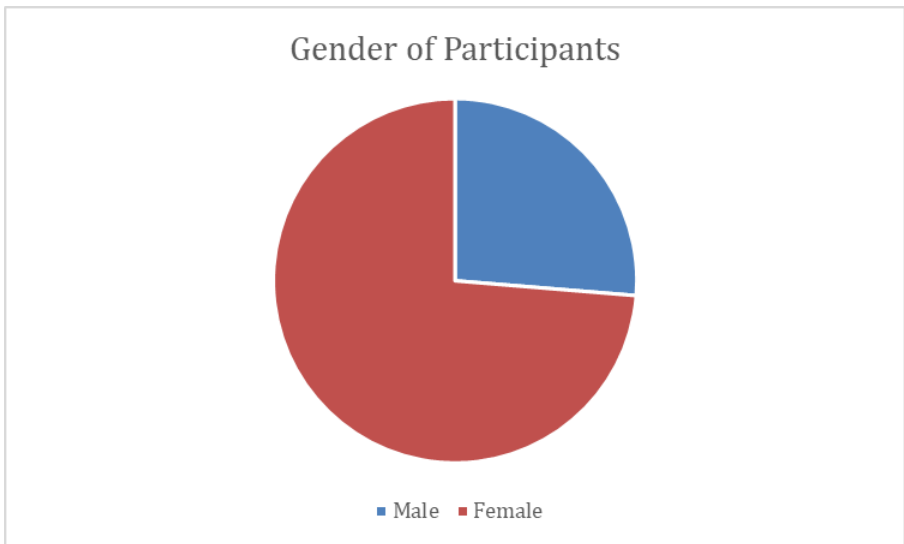
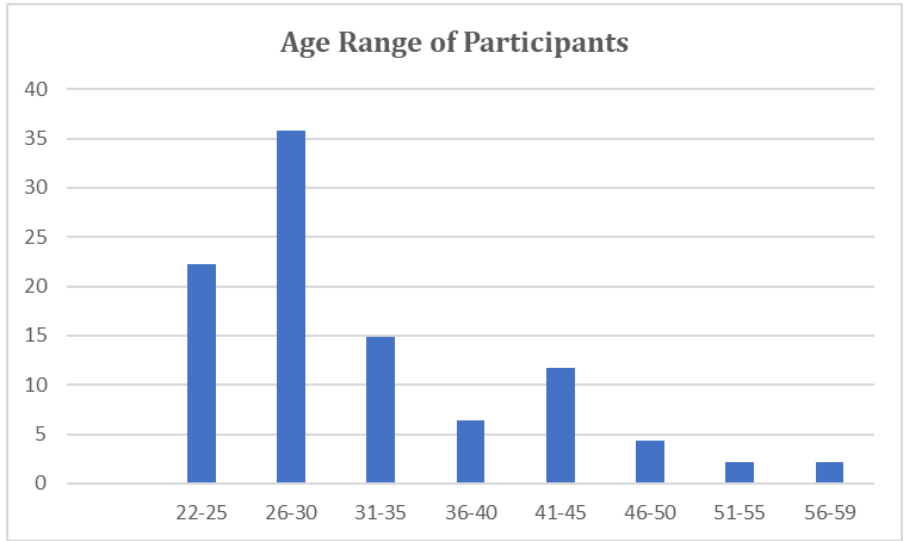
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Appendix A Demographic Tables



Appendix B

UNIVERSITY OF NORTH CAROLINA AT PEMBROKE CONSENT TO ACT AS A HUMAN PARTICIPANT

IRB Study # _____

Consent Form Version Date: 2/16/2021

Title of Study: Impact of the COVID-19 Pandemic on Job Responsibilities of Athletic Trainers

Principal Investigator Contact Information: Hannah Lee hml014@bravemail.uncp.edu

Faculty Advisor Contact Information: Dr. Susan Edkins susan.edkins@uncp.edu
Dr. Beverly Justice beverly.justice@uncp.edu

What are some general things you should know about this research?

You are being asked to take part in a research study because you are an athletic trainer and we want to learn more about the impact of COVID-19 on the job responsibilities of athletic trainers. To join the study is voluntary. If you decide to participate, you will be asked to complete a survey on your job responsibilities prior to the COVID-19 pandemic and during the COVID-19 pandemic. This study is looking at how athletic trainers' jobs and job responsibilities may have changed since the COVID-19 pandemic. This survey will take about 5 minutes to complete. You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

What are the risks associated with participation?

This study has no greater than minimal risk to participants. The Office for Human Research Protections defines *minimal risk* as "the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests." The only cost to the participant is the time it takes to complete the survey and the potential embarrassment if data is released to the public.

What are the benefits associated with participation?

There are no immediate personal benefits from your participation. However, your participation may benefit other athletic trainers as the results may allow us to demonstrate the breadth of responsibilities of athletic trainers.

How will your privacy be protected?

The survey will be administered through Qualtrics. All responses will be confidential, and no identifiable information will be asked or collected. Data will be stored in Qualtrics, which is accessed through a password protected account. Data downloaded for analysis will be stored in a password protected cloud storage through the university.

What if you have questions about this study?

You have the right to ask, and have answered, any questions you may have about this research. If you have questions or concerns, please contact one of the researchers listed at the top of the form.

What if you have questions about your rights as a research participant?

All research on human subjects is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, you may contact, anonymously if you wish, the chair of the Institutional Research Board (Dr. Erik Tracy) at (910) 775-4512 or by email at erik.tracy@uncp.edu.

Participant's Agreement:

I have read the information provided above and attest that I am at least 18 years old. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

- Yes
- No



AT PEMBROKE

Please answer the following demographic questions.

What is your age in years?

With which gender do you most closely identify?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

How many years have you been a credentialed athletic trainer?

- I am not a credentialed athletic trainer.
- <1 year
- 1-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- 21-25 years
- 26-30 years
- >30 years



Which of the following best matches your job setting prior to COVID-19?

- amateur, recreational, or youth sports
- clinic
- college or university
- health, fitness, sports, performance enhancement clinic, or club
- higher education, research, or both
- hospital
- independent contractor
- military, law enforcement, and government
- occupational health and industrial
- professional sports
- secondary school
- unemployed (prior to COVID-19)
- other

Which of the following best matches your job setting during to COVID-19?

- amateur, recreational, or youth sports
- clinic
- college or university
- health, fitness, sports, performance enhancement clinic, or club
- higher education, research, or both
- hospital
- independent contractor
- military, law enforcement, and government
- occupational health and industrial
- professional sports
- secondary school
- unemployed (prior to COVID-19)
- other

Since the COVID-19 pandemic began, how has your job status changed?

- No change in hours or pay
- Reduced pay but maintaining typical workload
- Laid off
- Not working but still employed
- Reduced work time (eg. changed to part time, PRN, or per diem)
- Unpaid furlough (leave of absence for a period of time)
- Working remotely from the job site with no change in status including pay or hours expected
- Working remotely from home with no change in status including pay or hours expected



What was your job title before the COVID-19 pandemic?

What is your job title since the COVID-19 pandemic?





In this section virtual patient care is defined as "telemedicine, telehealth, text messages, telephone calls, etc."

This section allows you to tell us about your job responsibilities **prior** to the COVID-19 pandemic (choose all that apply):

- Teaching (in-person)
- Teaching (online)
- Research
- Taping/Bracing
- Wound care
- Suturing
- IV administration
- Immediate/emergency care (in-person)
- Immediate/emergency care (virtual)
- Injury prevention (in-person)
- Injury prevention (virtual)
- Injury evaluation (in-person)
- Injury evaluation (virtual)
- Illness evaluation (in-person)
- Illness evaluation (virtual)
- Treatment (including modalities)
- Rehabilitation (in-person)
- Rehabilitation (virtual)
- Documentation

- Injury surveillance
- Evidence-based practice
- Educating stakeholders such as patients, parents, coaches (in-person)
- Educating stakeholders such as patients, parents, coaches (virtual)
- Inventory
- Budgeting
- Purchasing
- Oversight of capital improvements
- Policy development
- Facility management
- Cleaning and disinfection
- Risk management
- Nutrition education (in-person)
- Nutrition education (virtual)
- Travel planning for athletics (or for the team)
- Coordination of referrals (scheduling appointments, tests, etc.)
- Communication with other health care providers
- COVID screening
- COVID testing
- Contact tracing





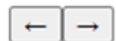
In this section virtual patient care is defined as "telemedicine, telehealth, text messages, telephone calls, etc."

Check each of the job responsibilities you have had during COVID-19 (choose all that apply):

- Teaching (in-person)
- Teaching (online)
- Research
- Taping/Bracing
- Wound care
- Suturing
- IV administration
- Immediate/emergency care (in-person)
- Immediate/emergency care (virtual)
- Injury prevention (in-person)
- Injury prevention (virtual)
- Injury evaluation (in-person)
- Injury evaluation (virtual)
- Illness evaluation (in-person)
- Illness evaluation (virtual)
- Treatment (including modalities)
- Rehabilitation (in-person)
- Rehabilitation (virtual)
- Documentation
- Injury surveillance
- Evidence-based practice

- Educating stakeholders such as patients, parents, coaches (in-person)
- Educating stakeholders such as patients, parents, coaches (virtual)
- Inventory
- Budgeting
- Purchasing
- Oversight of capital improvements
- Policy development
- Facility management
- Cleaning and disinfection
- Risk management
- Nutrition education (in-person)
- Nutrition education (virtual)
- Travel planning for athletics (or for the team)
- Coordination of referrals (scheduling appointments, tests, etc.)
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Describe any differences in your job responsibilities as an athletic trainer early in the COVID-19 pandemic versus the last 6 months.





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How likely is it that your job will return to how it was before COVID-19?

Extremely likely

Somewhat likely

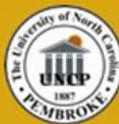
Unsure

Somewhat unlikely

Extremely unlikely

Based on your responses to your current job status and setting, please describe how the COVID-19 pandemic has affected you personally and/or professionally.

As we approach one year since the onset of the COVID-19 pandemic, please describe how you feel you have adjusted as an athletic trainer?

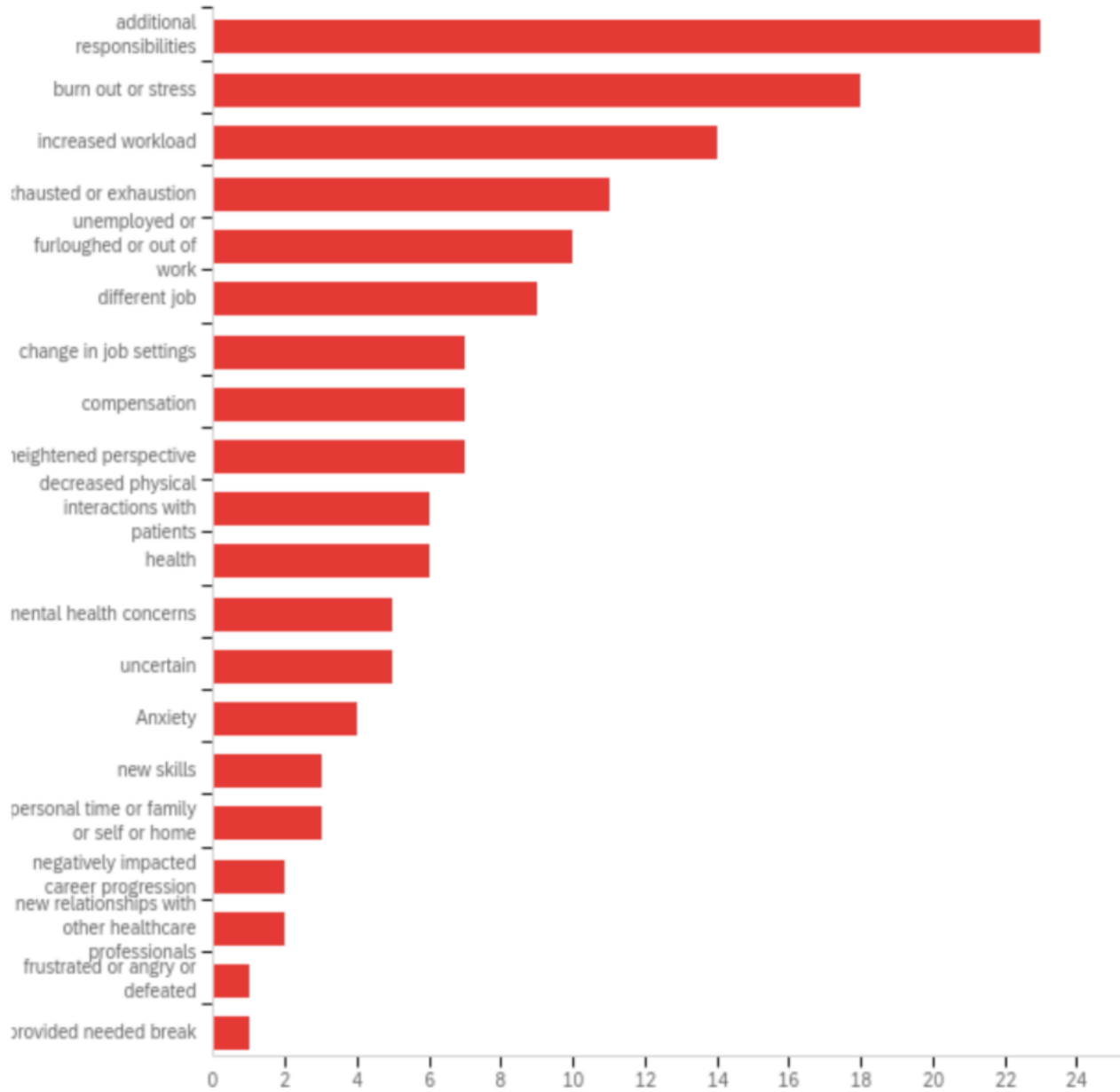


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We thank you for your time spent taking this survey.
Your response has been recorded.

Appendix C Qualitative Data

Professional and Personal Effects of COVID-19



ATs' Feelings of Adjustment

