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Student Perspectives on Transition from Bachelor’s to Master’s Degree for Professional Athletic Trainers: Advantages and Disadvantages

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Student Perspectives on Transition from Bachelor’s to Master’s Degree for Professional Athletic Trainers: Advantages and Disadvantages

Abstract
Purpose: The purpose of this study is to understand the perspectives of students interested in a career in athletic training on the degree change and what they perceive as advantages and disadvantages to pursuing a master's level professional degree in athletic training. Method: A case study was conducted using an interpretivism framework informed by a constructionism theoretical stance. A focus group of six current undergraduate pre-athletic training students and individual interviews of three pre-athletic training graduates along with current and historical documents were used to collect data. An inductive approach was used to analyze data along with reflexive thematic analysis to extract the advantages and disadvantages of the degree change from the students’ perspectives. Results: Several advantages and disadvantages to the degree change were identified by participants. Advantages outnumbered disadvantages in all three data sources. The top three advantages to the professional degree change were advanced knowledge and education, increased trust in ATs, and more respect and recognition for the profession. The top three disadvantages to the professional degree change were cost of additional school, limited locations/distance to schools, and academic challenges. Conclusions: This study found that the mandated professional degree change in athletic training education has more advantages than disadvantages according to students interested in pursuing a career in athletic training. With stakeholder knowledge of these student perspectives, institutions and master’s level professional ATPs may be better prepared to implement to assist future students in overcoming barriers and potentially increase enrollment and prevent an AT shortage in the future.

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ABSTRACT

Purpose: The purpose of this study is to understand the perspectives of students interested in a career in athletic training on the degree change and what they perceive as advantages and disadvantages to pursuing a master's level professional degree in athletic training. Method: A case study was conducted using an interpretivism framework informed by a constructionism theoretical stance. A focus group of six current undergraduate pre-athletic training students and individual interviews of three pre-athletic training graduates along with current and historical documents were used to collect data. An inductive approach was used to analyze data along with reflexive thematic analysis to extract the advantages and disadvantages of the degree change from the students’ perspectives. Results: Several advantages and disadvantages to the degree change were identified by participants. Advantages outnumbered disadvantages in all three data sources. The top three advantages to the professional degree change were advanced knowledge and education, increased trust in ATs, and more respect and recognition for the profession. The top three disadvantages to the professional degree change were cost of additional school, limited locations/distance to schools, and academic challenges. Conclusions: This study found that the mandated professional degree change in athletic training education has more advantages than disadvantages according to students interested in pursuing a career in athletic training. With stakeholder knowledge of these student perspectives, institutions and master’s level professional ATPs may be better prepared to implement to assist future students in overcoming barriers and potentially increase enrollment and prevent an AT shortage in the future.

Keywords: athletic training, education, graduate programs, transition, advantages, disadvantages
INTRODUCTION
Athletic training education has experienced major transformations since its inception in 1959. It has evolved from humble beginnings as a very basic curriculum in physical education to fully accredited master's level professional athletic training programs (ATPs) and doctoral programs. Transformation from the original athletic training curriculum model started in 1969, with the first bachelor's degree-level professional ATPs recognized by the National Athletic Trainers' Association (NATA). Then in 1970, the first national certification exam was administered by NATA. Next, in 1972, the first graduate athletic training education program was approved, and in 1980 NATA passed a resolution requiring schools with a bachelor's-level professional ATP to offer an approved athletic training curriculum major or equivalent. This would then allow graduates to take the NATA Board of Certification (BOC) exam to become certified and authorized to practice as an athletic trainer (AT) through completion of an internship.

In the late 1980s, the NATA Professional Education Committee sought to gain recognition and accreditation of entry-level ATPs by the American Medical Association Committee on Allied Health Education and Accreditation (CAHEA). However, it was not until 1990 that athletic training was officially recognized as an allied health profession by the American Medical Association. Bachelor's level professional ATPs received accreditation by CAHEA in 1994, and the first accredited master's level professional ATP started in 1996. The NATA Education Task Force then addressed standardization of the educational requirements for certified ATs. In 2004, it became a requirement to attend an accredited bachelor's or master's professional ATP in order to sit for the certification exam, and the internship route to certification was dissolved.

ATPs are now accredited by the Commission for Accreditation of Athletic Training Education (CAATE). In 2012, this organization, along with NATA, BOC, and the NATA Foundation formed the Athletic Trainers' [AT] Strategic Alliance and began to examine the professional degree level that would best prepare students to become ATs. It took over 2 years of analysis, including examining other professional programs at the master's degree level, a study by a health care economist regarding athletic training education, and various expert opinions to determine that the entry-level professional degree in athletic training would be at the master's level. This decision was announced in 2015, and it specified that the new CAATE standards would include a requirement that all professional ATPs be at the master's degree level within 7 years. According to the joint statement from the AT Strategic Alliance, "A critical link to acceptance in the broader health care arena is the ATs' level of professional preparation. This decision to shift the degree level is essential to ensuring our future ability to meet the expectations of the health care team, to continuing to improve patient outcomes, and to keeping our profession sustainable for generations to come." After the start of the fall semester of 2022, bachelor's degree programs were not allowed to "admit, enroll, or matriculate students into the athletic training program."

The impetus for changing to a required master's degree was the need for improvement of the athletic training profession to remain relevant and vital, to improve and enhance clinical education of students and student retention, and to better align the profession with other healthcare professions such as physical therapy and occupational therapy. However, there are several perceived negative implications of this mandate: "professional retention, economic effects on students, a decrease in autonomous practice, a lack of evidence to support this move, and a loss of existing athletic training education programs," to name a few. A major implication of this announcement was the expected dissolution of all accredited bachelor's level professional ATPs by the fall semester of 2022. From January of 2020 until July of 2021, the number of accredited professional ATPs active and in good standing (bachelor's and master's) decreased from 373 to 40. As expected, the number of bachelor's degree level professional ATPs declined significantly from 297 to 40, and the number of master's degree level professional ATPs had increased from 76 to 283. Some of these bachelor's programs were expected to transition to a master's professional program, but many did not, leaving fewer educational options for students. To date, numerous schools have voluntarily withdrawn their accreditation status and dissolved their ATPs, while fewer other programs are transitioning to a master's level professional degree program with degree change pending status. Overall, this leaves students with fewer options for a master's level professional ATP while presenting both existing and new barriers that could make attending graduate school more difficult or even impossible.

Due to the additional time commitment, academic requirements, limited school choices, increased costs, and possible financial burden, this monumental change could decrease the number of students interested in this profession and the number of students enrolling in graduate level athletic training programs, eventually resulting in a shortage of ATs. Researchers have studied characteristics of students in the master's professional ATPs, but much of the data were from the program directors rather than the students themselves. At the time of the study, the authors could find no published research focused solely on students' perspectives and experiences with this monumental change in athletic training education. If students' perspectives are examined and understood, the toll this degree change requirement takes on programs and the profession may be reduced. Therefore, a study that investigated the students' perspectives about this transition was warranted. The purpose of this study was to understand the perspectives of students interested in a career in athletic training on the degree change and what they perceived as advantages.

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and disadvantages to pursuing a master’s level professional degree in athletic training. To understand students’ viewpoints, the primary research question that guided this study was: What do current and former pre-athletic training undergraduate students perceive as the benefits and challenges of obtaining a master’s level professional degree in athletic training?

METHODS
This study used an interpretivism framework with a case study approach. A focus group interview was conducted with 6 undergraduate students who intended to pursue a degree in athletic training to learn more about them and the context within which they were making decisions regarding attending graduate school for athletic training. In addition to the focus group, formal individual interviews were conducted with 3 students who had completed an undergraduate program in pre-athletic training but had not yet pursued the graduate degree in athletic training, to better understand their experiences and perspectives, both past and present, that influenced their decision. Additionally, 27 documents from an Introduction to Athletic Training class assignment were analyzed. The assignment included the following questions: How do you think the professional degree change impacts the field of athletic training? What are the positives? Negatives? Why? Students from the previous 10 semesters had submitted the answers to these questions in written format. Documents available publicly online were also examined, including meeting minutes from the various organizations involved in the planning and implementation of this degree change in athletic training.

Participants
The participants in this study were purposefully recruited and included 6 undergraduate students enrolled in a pre-athletic training program who participated in a focus group and 3 former students who had completed the program and graduated but did not attend graduate school for athletic training who participated in individual interviews. There were 3 females and 3 males (age = 21 ± 1.5 years) in the focus group and 2 females and 1 male (age = 22.3 ± 1.4 years) in the individual interviews. All participants were assigned pseudonyms to protect their identity. LeAnn, Kelly, and Dale were the former students who participated in the individual interviews while Joe, Brad, Mike, Betty, Angela, and Jennifer were the focus group participants. In addition to the interviews and focus group, documents were analyzed and identified by numbering each one.

Setting
This study was conducted on the campus of a public 4-year university in Tennessee where the participants were either current or former undergraduate students. The campus draws students primarily from the surrounding region and from within the state of Tennessee with many students commuting to campus versus living in on-campus housing. The pre-athletic training program from which participants were selected consisted of 37 students at the time of the study.

Procedures
Upon approval from the institutional review board (IRB), participants for the focus group were gathered through a recruitment email sent to all current undergraduate pre-athletic training majors at a 4-year university. Potential participants for the individual interviews were also contacted via email and cell phone. Once all potential participants were identified (for both focus group and individual interviews), the study was explained to them via email, and they were given an opportunity to ask questions via email or in person in a private office and given at least 1 week to consider whether they would participate. Once participants’ agreement to participate had been received via email or text, written informed consent was obtained from each participant that described in detail the purpose of the study, the role of the participant, procedures to be followed, duration of the study, benefits of the study, alternate procedures and/or steps for withdrawing from the study, description of any potential discomforts or risks, and the plan to maintain participant confidentiality, privacy, and anonymity.

A semi-structured interview guide was created based on the purpose of the research and questions guiding the study. The interview guide included 11 open-ended questions for the focus group and 13 open-ended questions for the individual interviews. The focus group interview and 2 of the individual interviews were conducted in person while the third individual interview was conducted via Zoom. All interviews were recorded on more than 1 electronic device, and verbal permission was sought from all participants to do so prior to recording. Documents and related artifacts were retrieved from office files and any relevant websites as well as other ancillary published material.

Analysis
Data were analyzed by the first author using an inductive approach of open coding and in-vivo coding of each transcript. After 2 readings of each transcript, and once saturation was achieved, the frequency of each code’s appearance was counted, categories were formed by related codes, and themes were then developed from the codes and organized into a chart. To ensure trustworthiness the researcher used triangulation, member checking, and reflection of researcher bias and subjectivities.

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Triangulation was accomplished by including individual interviews, a focus group interview, and document analysis as data collection methods. Member checking was completed by sharing with participants the portion of the report draft in which their words appeared to ensure accurate interpretation of their intended meaning. The researcher maintained memos throughout the data collection process, which allowed for continual comparison and monitoring of biases and subjectivities.

RESULTS
The findings of this study are presented by categories and themes within those categories that were elicited during inductive analysis of the individual interviews, focus group interviews, and documents. The major categories found in this study were advantages of the required master’s degree and disadvantages of the required master’s degree.

Advantages of Required Master's Degree
When asked directly what the advantages were of the required master’s degree in athletic training, participants identified several in individual interviews, in the focus group, and in document analysis. The top 3 advantages, according to all sources, were advanced knowledge and education, increased trust in ATs, and more respect and recognition for the profession. Additional advantages included increased and improved skills, possible increase in pay, improved patient outcomes, increased use of evidence-based practice (EBP), and a decrease in supply resulting in an increased demand for ATs (this was also seen as a disadvantage to some participants).

Advanced Knowledge and Education
In every individual interview and in the focus group, participants emphasized that a main advantage of the required master’s level professional degree in athletic training was the advanced knowledge and education that would occur due to graduate level education. The author of Document 11 connected the extended education to clinical practice, writing, “I believe that changing to a professional degree will give athletic trainers more time to prepare and allow them to gain more knowledge to better treat injured athletes or patients.” LeAnn, reflecting on her experiences with ATs who had a bachelor’s degree versus a master’s degree, noted differences in their knowledge. When comparing the 2, she stated:

Some of them that didn’t have to go to a master's degree … they didn’t think the same, so I don’t know if in grad school just the thought process of how they were teaching them how to do it was so different, but I can definitely see an increased knowledge of, like, clinically based guidelines and things like that.

Increased Trust in ATs
The participants of the focus group mentioned increased trust in ATs more than any other advantage of the degree change. Kelly, in the individual interview, mentioned this idea 5 times and stated that she felt that “us being able to do more makes it easier for them to come to us and trust us more.” In the focus group, when participants were asked about advantages to the required degree change, the conversation focused on the importance of building relationships and how trust develops from such relationships. The participants agreed that increased education and knowledge would lead ATs to have better relationship-building skills, and thus increased trust in ATs would follow. Joe stated, “I feel like building relationships with your athletes is going to help their outcomes because they’re going to be more open with you and they’re going to be more forthcoming with information.” Brad went on to say that “it all starts with trust and building relationships with each and every athlete.”

More Respect and Recognition for Profession
Many of the participants indicated that the required master’s degree in athletic training would result in more respect and recognition for ATs by the patients they work with and the patient’s families as well as other healthcare professionals. In Document 2, the writer stated, “More training could come with more respect.” Document 11’s author wrote: “Another positive way it will impact athletic training is by generating more respect for this field in general by other healthcare professionals and even the overall public.” Document 14’s author wrote, “Athletic trainers will be viewed with more respect.” In the individual interview, Kelly emphasized this advantage more than any other participant. When asked what advantages the degree change may have, Kelly stated, “I feel like that will give us the respect that we definitely deserve” and went on to say, “I think it’ll start helping people recognize what we do.” When asked about advantages to the degree change, Dale also mentioned how ATs may be perceived:

So, you know, if athletic trainers end up getting their master's and they have that under their belt, they seem to be more qualified upon what they're saying and recommending to their athletes, then that could potentially give them a little more credibility.
Increased and Improved Skills
The fourth most frequently mentioned advantage of the required master's degree in athletic training was the anticipated outcome of increased and improved skills for ATs entering the career. Participants indicated that the graduate degree would enhance the skill set of ATs and result in more overall skills than a bachelor's degree program. This, they indicated in part, may be due to new skills being taught and required in the standards and competencies required by the CAATE. During the individual interview, Kelly indicated that implementation of new skills for ATs in graduate school could result in more independence for ATs. She commented: “I know in graduate school, they’re starting to do IVs and everything like that, and with that, we’re going to be able to do more by ourselves, like in locker rooms or on the sidelines.” Dale connected all the advantages together when he stated, “More time in the classroom, more time to learn more, more resources to use and get patient better quicker, and that kind of thing.” During the focus group interview, Joe generalized that “skills and just overall abilities are going to be more refined and more fine-tuned for the profession to make it better,” while Jennifer stated that having skilled athletic trainers means “less mess ups, and they’ll be better trained for what they’re doing.”

Possible Increase in Pay
Although there is no current data indicating a graduate degree will mean higher pay for ATs, several participants included the potential for an increase in pay for ATs as an advantage to the required degree change in athletic training. In the documents, more than in any other data source, a possible increase in pay was mentioned as an advantage. Document 5’s writer stated, “I think it’s a big change that might lead to a positive of higher salary for ATs,” and authors of Document 4 and Document 6 also mentioned the potential pay increase. During his individual interview, Dale elaborated on how he felt the degree change could impact pay for ATs:

It sets up the profession to get a little bit more money … more financial incentive just because they’ve gone to school longer, they have more education about it, and they have more time invested into it, so it sets up the profession for better ability to pay ATs.

The potential for increased pay was only mentioned once during the focus group interview, when Mike, asked about advantages to a degree change, stated, “I also think maybe the pay will increase due to it being a master’s degree.”

Improved Patient Outcomes
When participants in the individual interviews and in the focus group were asked how the required degree change might impact outcomes, they all agreed that the increased education, knowledge, and skills would result in improved patient outcomes. During the individual interview with Kelly, she equated trust in ATs to better outcomes, stating that she believed athletes would find it easier “to come to us and trust us more because we don’t have to send them to someone else.” After contemplating the question about how the degree change might impact patient outcomes, LeAnn answered, “I think with more education and the more that you know and practice and the better the skill set … I’m assuming that’s going to equate to, you know, better patient outcomes.” During the focus group, Betty simply stated of patients, “They’re going to have much better results.” Joe elaborated, mentioning again the importance of trust and relationship building and how that may improve patient outcomes: “I feel like building relationships with your athletes is also going to help their outcomes because they’re going to be more open with you and they’re going to be more forthcoming with information.” The effect the degree change could have on patient outcomes was not addressed in the documents.

Increased Use of Evidence-Based Practice
The idea that ATs who attend a master’s level professional ATP are more likely to implement EBP into their practice than those with only a professional bachelor’s degree in athletic training was mentioned by LeAnn during the individual interview. In her experience as an undergraduate, she said, she worked with 1 preceptor who had completed a master’s level professional ATP and others who had completed a bachelor’s level professional ATP. When comparing the AT who had graduated from a master’s degree program to those who had not, she stated that “his way of thinking, just like the clinically based practice, he was there, like, he knew. Whereas some of them that didn’t have to go to a master’s degree … they didn’t think the same.” She went on to say:

The ones who went to grad school, they were always, like, wanting to see what had changed. You know, wanting to do the research … I think they were more used to, like, the research and the evolutions of it. And so, and I don’t know if that’s just because they, like, chose to do a higher education where that was normal or whatever, but maybe like that.
During the focus group interview, Betty indicated that ATs with a master's degree are also more willing to use EBP to guide their practice:

It’s like they try different things, like BFR [blood flow restriction therapy] and stuff like that, so they’re very explorative about how to find ways to do rehab … they’re trying to find variability, and they’re not applying the same thing to each person.

**Decreased Supply and Increased Demand**
The possibility of the degree change resulting in a decreased supply and increased demand for ATs was mentioned most often, among the 3 sources of data, in the documents, and a couple of times during the focus group interview. In Document 5, the author wrote: “Less people pursue this career because of more years of school. This could also be a positive, though, because the demand of ATs might increase.” In Document 8, the student offered 2 reasons that the degree change would result in more demand for ATs. First, he said, fewer people “will get accepted to graduate programs compared to undergraduate programs.” He also said that fewer people would pursue the degree because of more years of school. This could also be a positive though, because the demand of ATs might increase, making salary and job opportunity rise … not as many people will actually go through with getting their master’s, so there will be more job opportunities.

This was not mentioned in any of the individual interviews; however, in the focus group interview, Jennifer had a similar sentiment: “Requiring a master’s now is going to scare some people away from going into an AT program, but also shows like who’s actually dedicated to want to be an athletic trainer.”

**Disadvantages of Required Master’s Degree**
In addition to being asked about the advantages of the required master’s degree in athletic training, participants were asked directly what they felt were the disadvantages of the change. Overall, there were fewer disadvantages identified by participants than advantages. The top 3 disadvantages mentioned in the individual interviews, focus group, and document analysis were: cost of additional school, moving away to attend graduate school (limited locations, distance to schools), and academic challenges to overcome. Other disadvantages of the degree change identified were additional time commitment of graduate school and a decreased supply in ATs.

**Cost of Additional School**
The cost of additional years of school topped the list of disadvantages, from student perspectives, of the required master’s level professional degree in athletic training. This was the most commonly discussed disadvantage, barrier, and reason why students who had already graduated had not yet gone on to graduate school. The writer of Document 2 indicated that “some people may not be able to obtain their master’s because of financial obligation.” During individual interviews, all 3 participants discussed the various issues related to the cost of attending graduate school and how it was a disadvantage to students. For instance, Dale stated, “So, as far as disadvantages go, I mean, I can speak personally to it. You got some people who just can’t afford going to grad school and shelling out that much money.” He noted the future financial burden that could result:

Even though it’s only 5 semesters that I’m going to be going to grad school, that’s a lot of money taken out on student loans, and I really don’t want to be paying off on that debt for the rest of my life.

Kelly echoed Dale’s sentiment about the cost of attending graduate school:

I think a lot of the disadvantages would be, like, for anyone who is in the same situation as me, we can’t fully afford to go to graduate school right now … so it’s mostly money and being able to afford it.

The participants of the focus group did not mention as frequently as individual participants the disadvantage of additional education costs; however, cost was the most frequently mentioned disadvantage from their perspective. Betty elaborated on this disadvantage:

I would say finding a way to pay for it, because I mean, some people can rely on a parent to like, you know, sign on a student loan or something like that, but some people literally can’t do that.
**Limited Locations and Distance**

The second most frequently mentioned disadvantage to the required master’s level professional degree in athletic training was the limited number of programs in close proximity to the participants, which would require them to move away from home. Only three accredited master’s level professional ATPs were available in Tennessee at the time of this study. If they enrolled in the master’s program, most participants in this study would have to find new housing in a city or town in which they have never lived and would likely be a minimum of 2 to 3 hours away from the university they attend. The student who authored Document 10 indicated this was the only disadvantage to the degree change. In Document 12, the writer lamented that “having to go off and stay at a different school for 2 years is a big problem for some or most students.” During the individual interviews, Dale expressed frustration when he said:

> You want to stay in the state of Tennessee, you have to go to the complete opposite side of the state just to do it, you know, so that’s kind of an issue where people don’t want to be 5-6 hours away from home … I mean, there’s plenty of accredited schools out there that have certified athletic training programs, but there’s only 3 in Tennessee.

The focus group participants mentioned as an issue several times the limited programs and locations, and Betty expressed concern that the limited numbers of programs in close proximity could force someone to attend a program they did not necessarily want to attend. She stated:

> If you don’t get into a school you want to, like, get into, and then you’re accepted somewhere, like, farther away that was, like, maybe a plan B, now you’re probably unhappy going to that school because, like, you’re away from where you truly want to be.

Jennifer agreed with the limited options: “So, I mean just hard to get into grad school with not a lot of choices,” and Angela commented: “I would just say location … ‘cause I have always been in Tennessee, and there’s not a lot of options here.”

**Academic Challenges**

Study participants mentioned that some potential athletic training students might struggle to overcome the academic challenge of admission to graduate school. This disadvantage was not mentioned in any of the 27 documents analyzed, nor by Dale or Kelly in the individual interviews. However, it was mentioned several times by LeAnn during her interview, and it was discussed somewhat at length during the focus group interview. When asked about disadvantages to the required master’s level professional degree in athletic training, LeAnn stated:

> You know, it’s really hard to get into grad school … a lot of the things they ask for to get into grad school like, you know, the GRE [Graduate Record Exam], you know, what if you don’t score well on that? I know a lot of people in my program were worried about that … there’s just a lot hinging on, like, the grades that you make and your GPA. And while that’s important, that doesn’t necessarily represent how you would be as an athletic trainer. That just shows how you can take a test and how you do in the classroom, which isn’t what athletic training is.

Much like LeAnn’s statement, focus group participants identified the main academic challenge would be the GRE, its practical application to athletic training, and its ability to predict success in graduate school. Mike commented that a disadvantage would be “the requirements to get into the school, like some other colleges still requiring the GRE. Some people don’t want to take it.” He added that some people are “not good test takers, and then that just throws their chances away of getting into grad school.” Joe, who had taken the GRE a few months prior to the interview, focused on the practical applicability of the GRE when he said with frustration:

> I feel like with the GRE, I don’t know if it has anything to do with the field of exercise science in any form or fashion. So, if there was a version of the test that was more geared towards the specific profession you were wanting to get into, then I could understand why it would be beneficial and required. But it wasn’t, it was pointless.

**Additional Time Commitment of Graduate School**

Most graduate programs require a minimum 2-year commitment. This was viewed as a disadvantage by many of the students who had completed the documents, by LeAnn, and by several members of the focus group. In Document 16, additional time was the only disadvantage mentioned. The author of Document 4 said the degree change “may be negative because some people may
not want to get their master’s degree and take an extra 2 years of school.” LeAnn suggested that the extra time commitment may weed out those who are not dedicated to the field of athletic training:

It’s like you figure out who really wants to be an AT, who really does not want to be an AT, ‘cause when you’re talking about committing 6 years of your life and that much money, people are like, “Oh, do I want to do this?”

In the focus group interview, Betty spoke more about this than anyone when she commented, “I would say time and money are definitely the biggest disadvantages … I just know it’s going to be time-consuming … and I think some people don’t want to do it just because of the time it takes to do it.”

**Decreased Supply of ATs**

Although mentioned less frequently as a disadvantage to the degree change, a decreased supply of ATs was discussed in the documents, in individual interviews, and in the focus group as a disadvantage that could have lasting effects on the profession of athletic training. In Document 5, the author wrote, “A negative could be less people pursue this career because of more years of school” while Document 9’s author wrote, “It could turn people away from pursuing this job due to the increase in schooling.” Dale said the change “kind of limits the field for ATs as far as new people coming into the profession.” During the focus group interview, Jennifer pointed out that many high schools across the state do not have ATs now. She said the degree change might exacerbate the problem because “it might scare people away from it, having to do more schooling … A lot of high schools in Tennessee don’t have athletic trainers, so it’ll cut that number down even more, so it won’t help that.”

**DISCUSSION**

The research question guiding this study was: What do current and former pre-athletic training undergraduate students perceive as the benefits and challenges of obtaining a master’s level professional degree in athletic training? The findings demonstrated benefits, or advantages, outnumbered challenges, or disadvantages, in all three data sources.

**Advantages**

The most commonly mentioned advantages of the master’s level professional degree in athletic training were advanced knowledge and education. Participants assumed that 2 more years of school would result in advanced knowledge and education. Although previous research has not explored the specific differences in knowledge gained through a master’s degree program versus a bachelor’s degree program in athletic training, differences in achievement on the BOC exam have been identified in the research. For instance, according to CAATE, the average first attempt pass rate on the BOC exam for bachelor’s degree programs was 79%, whereas it was 84% for master’s degree programs. The overall pass rate with any number of attempts was 90% and 94%, respectively. This may indicate that a graduate from a master’s degree program may, in fact, have advanced knowledge versus a graduate of a bachelor’s degree program. Previous research found that preceptors and faculty members of master’s degree ATP perceived the change would result in advancement of the profession in regard to educational and clinical preparation of students at the master’s degree level, which is in agreement with this study’s findings. In addition, another study found that 91% of master’s level professional ATP program directors felt the master’s route was better at preparing students to pass the BOC exam, and that it better prepared them to practice as an athletic trainer.

Although not identified in previous studies reviewed for this research, increased trust in ATs by other healthcare professionals, patients, and the public in general was another advantage to the master’s level professional degree in athletic training discussed by this study’s participants. Trust is important in any healthcare provider/patient relationship, and one could reasonably assume that if someone knows an AT has a higher level of degree, such as a master’s versus a bachelor’s, the AT will have more knowledge and thus, is more trusted. Along the same lines of trust, participants indicated that the required master’s level professional degree in athletic training would equate to more respect and recognition for the profession of athletic training. This, according to participants, is because the advanced degree aligns ATs with other professions such as physician assistants, nurse practitioners, physical therapists, occupational therapists, and other healthcare professionals regarding level of education. The presumption among participants was that more education would lead to increased respect and recognition not only from patients, but also from employers, administrators, and other healthcare professionals.

Along with advanced knowledge and education, participants in this study indicated that the master’s degree requirement would lead to an increased number of skills and an overall improvement in skills for ATs. Although bachelor’s level and master’s level professional ATPs have always been required to teach the same skills and meet the same standards, participants felt the graduate program would be more comprehensive and include more skills training versus an undergraduate program. Once the decision was
made to dissolve the bachelor’s degree programs, the CAATE convened a committee to update the standards and announced “a list of anticipated substantial changes to accreditation requirements. These changes included the following: periods of full-time clinical engagement, strong foundational scientific knowledge, faculty with areas of specific expertise, inclusion of the Academy of Medicine’s core competencies, and administrative alignment with schools of health professions.”

Therefore, the assumption may be correct that graduates of master’s degree programs will have more skills and improved skills with the updated standards. However, one must also consider that students will now only have 2 years of exposure, education, and training, whereas with a bachelor's degree professional program, they likely had 3 or more years. This is because many bachelor's degree programs would start students off immediately with clinical requirements and athletic training-related coursework. In addition, students who apply to master’s level professional ATPs must meet specific pre-requisite course requirements, academic requirements, and minimal clinical observation hours with an AT, but they are not required to have a pre-athletic training major or degree to be admitted. Therefore, students who enroll in a master’s level professional ATP likely have fewer hours of observation and clinical experience than those who went through a 4-year bachelor’s degree ATP.

Another advantage of the required master’s level professional degree in athletic training that participants discussed was a possible increase in pay for ATs. This is an assumption participants made because they felt that since the minimum level of education required was being increased, the pay would increase accordingly. This assumption is likely accurate. According to the 2021 NATA Salary Survey Findings Report, the average salary by degree level in 2021 was $56,769 with a bachelor’s degree, $60,512 with a master’s degree, and $85,562 with a doctorate degree. Athletic trainers who held a master’s degree earned, on average, $3,743 more per year than those with a bachelor’s degree. However, these numbers do not take into consideration years of experience, job setting, gender, and many other factors that could influence income. In addition, since the master’s degree requirement has only recently been implemented, no current data are available to compare salaries prior to and after the degree change requirement.

Participants were asked if they felt the mandated degree change would impact patient outcomes. Some of their responses focused on the importance of relationship building and trust and how that might improve patient outcomes, while Dale focused solely on quantitative outcomes. He felt the requirement of an advanced degree for ATs could potentially decrease recovery time and decrease injuries overall due to the increase in education and skills. When collectively considered, the advanced knowledge and education, increased and improved skills, along with increased trust and respect all add up to improved patient outcomes, according to participants. This is sensible reasoning for improved patient outcomes. A patient's trust in their healthcare provider is extremely important. When the healthcare provider emphasizes the importance of relationship building, the patients tend to trust the provider more and thus, are more likely to comply with instructions and protocols.

Implementing EBP was another advantage of the degree change that was discussed by participants. This was a somewhat surprising answer, although it should not have been since the students who mentioned it in the individual and focus group interviews had taken a course focused solely on implementing EBP into athletic training practice. Underclass students, including 2 in the focus group and those who had completed the written assignment, had not yet been exposed to this concept. Even though it had not yet been studied in athletic training, the transition to a higher degree requirement in the health profession of physical therapy resulted in “greater implementation of evidence-based practice.” Since physical therapy is often referred to a peer profession of athletic training, it stands to reason the same would be true in athletic training. In addition, the NATA BOC has emphasized the importance of EBP implementation into practice for several years, even requiring ATs to get a minimum of 10 hours of EBP focused continuing education credits every 2 years to maintain certification.

The dynamic of decreased supply and increased demand of ATs were both a positive and a negative. One participant, Jennifer, specifically addressed this issue, and her feelings aligned with previous research. She felt that, although the degree change could decrease the number of students pursuing this career, students who pursued this degree would be more dedicated and committed to athletic training. This aligns with the findings from previous research that athletic training master’s degree program directors felt students would be more focused and mature, and students at the master’s level were more committed to a career as an AT. The concept of a decreased supply of ATs comes from the notion that some, or many, potential ATs may be intimidated by or discouraged about graduate school due to the additional time, academic challenges, and financial burden. Some may be unable to enroll due to an inability to overcome these barriers, like Dale, Kelly, and LeAnn. This may lead to a decrease in supply of ATs and hence, an increased demand. In most careers, this equates to an increase in pay, which would definitely be an advantage.
Disadvantages
There were significantly fewer disadvantages than advantages of the mandated degree change in athletic training discussed by participants and in the documents, which is encouraging for the athletic training profession in general. By and large, the most frequently discussed disadvantage to the degree change was the cost of additional years of school. It was mentioned more than any other topic across all questions, categories, and themes. It was obvious that this was a major concern for all students who participated in this study as it was typically the first answer when asked about disadvantages. This was predicted by previous research when the degree change was being discussed and implemented. With the likelihood that student debt would increase, previous studies indicated that this could be a potential barrier for students wishing to attend graduate school for athletic training.14-16

Another study found that the mean cost of an undergraduate program was $34,252 for a public 4-year school and $50,208 for a public 2-year master’s program.13 So, after completing both a bachelor’s and master’s degree, students could potentially be facing $80,000 or more in student loan debt. With no guarantees of an increase in pay from obtaining a graduate degree, and nearly all participants planning to take out student loans to pay for graduate school, student debt that could take decades to pay off was a major disadvantage and concern for most participants. This, combined with the difficulty of finding time to work to support oneself during a full-time master’s level professional ATP, is something participants discussed at length and why it was a primary concern. The second most frequently mentioned disadvantage to the mandated degree change was master’s level professional ATP location and distance away from their homes, which would require them to relocate. At the time of this study, the state of Tennessee had only 3 CAATE accredited master’s level professional ATPs. Participants were mostly from the local area around the university, and many of them expressed a certain level of discomfort with the idea of moving farther away from their families and friends to a new city and, possibly, a new state. This may be unique to this specific group of participants as many of them come from small rural towns in Tennessee and have minimal extended travel experience outside of the region and the state. Previous research also indicated that location was a determining factor for students in selecting a graduate school program. When examining factors that influenced participants’ choice of graduate school, researchers found that location was the biggest factor in selecting their master’s institution (34.6%), program reputation was second (23.1%), followed by cost (15.4%).16

Another disadvantage of the mandated degree change in athletic training that participants discussed was academic challenges. This was not mentioned in the documents or in the interviews with Dale or Kelly. However, LeAnn mentioned it several times and it became a point of focus during the focus group interview. Most master’s level professional ATPs typically require a minimum overall GPA of 2.75 or 3.0 or higher, require a minimum score on the GRE, and calculate the pre-requisite GPA separate from the overall GPA. Students are now required to have a minimum of 1 semester each of chemistry, physics, and biology as pre-requisites in order to attend a master’s level professional ATP due to the CAATE updates to standards. These courses are in addition to other, more standard prerequisites such as kinesiology and exercise physiology. These newly required courses are traditionally more difficult for some students and may present a challenge when it comes to meeting the minimum GPA requirements. In addition, the GRE exam is a standardized test that is difficult for many and could be a roadblock to acceptance to a master’s level professional ATP, although in recent years some programs have eliminated this requirement.

Graduate school requires an additional 2-year commitment from students. This additional time commitment was viewed as a disadvantage. This finding aligns with a study that found that time commitment was a primary barrier identified by students interested in applying to an ATP.17 Many students do not plan to attend graduate school; they just want to finish a bachelor’s degree in 4 years and start working and earning a paycheck. Therefore, 2 additional years of schooling was considered a negative aspect of the degree change by many in this study.

Although it was discussed as an advantage to the degree change because it could potentially increase demand for ATs, a decreased supply of ATs was also considered a disadvantage. This required degree change could steer potential ATs away from the field due to the reasons discussed above, such as cost, limited programs/location, academic challenges, and the additional time commitment that attending graduate school requires. This could result in a shortage of ATs across the country, which would impact athletes and many other active populations who rely on the services of ATs. On one hand, a decreased supply of ATs could increase demand for them and potentially drive up the pay for ATs. On the other hand, athletic programs and other organizations that rely on ATs to provide healthcare may face tough decisions regarding continuing programs or services if there are not enough ATs to fill positions.

Limitations and Future Directions
Although careful planning and sound practices were used in the collection and analysis of data for this study, as with any study, there were some boundaries. This study used qualitative data that seeks to add to our understanding of a phenomenon in a natural
setting through interpretation. Therefore, it was not intended to meet positivist-imposed ideas about valid and reliable research. For instance, the purposeful sampling technique used, and the very specific location and population of students selected for this study from one public university, allowed for understanding of the phenomenon being studied in its natural setting through interpretation of the participants’ perceptions and experiences. Other public and private colleges and universities that have pre-athletic training programs and students enrolled in those programs were not included in this study.

The participants in this study came from socioeconomic backgrounds that may not be representative of all students across all populations interested in pursuing a degree and career in athletic training, but they were representative of students on the campus where the study took place. In addition, the participants’ economic backgrounds likely affected their financial perspective related to attending graduate school, and this may be different than the entire population of pre-athletic training students. A second boundary is the sample size for the individual interviews. A larger sample of students may have provided a broader perspective and understanding of how students were impacted by this transition to a required master’s level professional degree. As a case study, participants were selected purposefully based on their ability to provide rich data within the boundaries of the case; therefore, it was not intended for the findings to be applied to different settings or populations. Researcher subjectivities and bias may be considered a limitation or boundary as the participants were current or former students interested in a career in athletic training; thus, the researcher had a vested interest in them and in their futures as potential athletic trainers.

This study examined the impact the mandated degree change in athletic training education had on the experiences and perspectives of current and former students from a single university. All the participants in this study were from the same undergraduate program, at the same university, and they were all White students from within the same general geographic region with mostly similar socioeconomic statuses. Future research should include a more diverse population from varying schools, programs, socioeconomic statuses, ethnicities, and races to get a more inclusive view of student perspectives and experiences related to the degree change requirement. In addition, future research could include students who are currently in or have graduated from a master’s level professional degree ATP to identify how they overcame the barriers identified in this study and what, if any, financial considerations were given to them to help overcome the financial burden. Finally, future research should include studies of master’s degree-level professional ATPs and what programs or policies are in place to assist students in overcoming these challenges and barriers to attending graduate school.

CONCLUSION
This study found that, from student perspectives and experiences, the mandated professional degree change in athletic training education has more advantages than disadvantages. With stakeholder knowledge of these student perspectives and experiences, institutions and master’s level professional ATPs may be better prepared to implement changes to assist future students in overcoming barriers and potentially increase enrollment and prevent a future AT shortage.

References


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