# National Athletic Trainers' Association-Accredited Postprofessional Athletic Training Education: Attractors and Career Intentions

## Stephanie M. Mazerolle, PhD, ATC\*; Thomas M. Dodge, PhD, ATC, CSCS†

\*University of Connecticut, Storrs; †Springfield College, MA

**Context:** Anecdotally, we know that students select graduate programs based on location, finances, and future career goals. Empirically, however, we lack information on what attracts a student to these programs.

**Objective:** To gain an appreciation for the selection process of graduate study.

**Design:** Qualitative study.

**Setting:** Postprofessional programs in athletic training (PPATs) accredited by the National Athletic Trainers' Association.

**Patients or Other Participants:** A total of 19 first-year PPAT students participated, representing 13 of the 16 accredited PPAT programs.

**Data Collection and Analysis:** All interviews were conducted via phone and transcribed verbatim. Analysis of the interview data followed the procedures as outlined by a grounded theory approach. Trustworthiness was secured by (1) participant checks, (2) participant verification, and (3) multiple analyst triangulations.

**Results:** Athletic training students select PPAT programs for 4 major reasons: reputation of the program or faculty (or both), career intentions, professional socialization, and mentorship

from undergraduate faculty or clinical instructors (or both). Participants discussed long-term professional goals as the driving force behind wanting an advanced degree in athletic training. Faculty and clinical instructor recommendations and the program's prestige helped guide the decisions. Participants also expressed the need to gain more experience, which promoted autonomy, and support while gaining that work experience. Final selection of the PPAT program was based on academic offerings, the assistantship offered (including financial support), advanced knowledge of athletic training concepts and principles, and apprenticeship opportunities.

**Conclusions:** Students who attend PPAT programs are attracted to advancing their entry-level knowledge, are committed to their professional development as athletic trainers, and view the profession of athletic training as a life-long career. The combination of balanced academics, clinical experiences, and additional professional socialization and mentorship from the PPAT program experience will help them to secure their desired career positions.

*Key Words:* graduate education, professional socialization, mentorship

#### **Key Points**

- First-year graduate students in these postprofessional athletic training education programs sought to advance their entry-level knowledge and were enthusiastic about their futures as lifelong athletic trainers.
- Mentors were both critical links in the student's decision to pursue postprofessional athletic training education and important influences in the selection of a specific program.
- As the numbers of expert athletic trainers increase, the role of athletic trainers within the health care system will be strengthened.

A s the field of athletic training continues to grow, more and more athletic trainers (ATs) are pursuing postprofessional educational opportunities. Nearly 70% of all ATs possess at least a master's degree.<sup>1</sup> Despite this large number of ATs with graduate degrees, a great amount of diversity exists as to the specific degrees possessed by ATs. Athletic trainers pursue master's degrees in a number of areas, including advanced athletic training, exercise physiology, biomechanics, psychology, and business, as well as physical therapy, occupational therapy, or medical school. Although little has been reported about the decision processes of athletic training students (ATSs) selecting a particular postprofessional degree, we do know both anecdotally and empirically that those who opt to continue their studies are driven by passion, the need for

continued education and work experience, and the desire to facilitate their careers as ATs.<sup>2</sup>

One potential avenue for graduate study among ATs is a National Athletic Trainers' Association (NATA)-accredited postprofessional program in athletic training (PPAT). The goal of these programs is to offer material beyond the entry-level athletic training education programs.<sup>3</sup> Historically, these programs have offered a balanced curriculum consisting of clinical, academic, and research experiences designed to enhance the athletic training skills and expand the knowledge base of the student.<sup>3,4</sup> In essence, these programs are aimed at developing more skilled ATs. The PPAT-trained ATs who possess advanced clinical skills should, therefore, be capable of achieving more positive outcomes for their patients.<sup>5</sup> Motivation behind a student's

decision to attend graduate study, and specifically a PPAT, has become an important topic for athletic training scholars and educators because it can help to recruit and retain quality students and aid program development.

A recent study<sup>6</sup> of ATs entering PPAT education indicated that those students were motivated to pursue careers in athletic training, a finding that supports the 2007 presentation by Sauers<sup>5</sup> at the NATA Educator's Conference, who noted that most ATs enrolled in PPAT programs pursue full-time athletic training positions. Organizational turnover continues to be an issue facing athletic training,<sup>7</sup> but attending a PPAT program may indicate a person's desire to stay in the athletic training field. Currently, only 15 PPAT programs exist (accredited programs are listed at http://www.nata.org/education/educational-programs/postprofessional-education-programs); with more than 350 entry-level athletic training programs available, the number of PPAT programs does not match up well with the number of entry-level ATs graduating on a yearly basis. It has been argued<sup>8</sup> that we need to develop more PPAT programs to accommodate the large number of entry-level ATs and therefore elevate the knowledge base of the profession as a whole. The standards and guidelines for postcertification athletic training graduate programs include 6 general principles of advanced education: facilitation of skills mastery, development of critical and independent thinking, theoretical understanding, proficiency with research and writing, opportunity to provide services to the community, and diversity in learning experiences.<sup>3</sup> Programs have the autonomy to develop their curricula and clinical education experiences, but these often reflect the program's faculty, philosophy of the program, and areas of distinction. Development of the program and subsequent accreditation of a program by the NATA is based on providing experiences that promote skill advancement as it pertains to clinical, teaching, and research abilities. The experience in a PPAT program can be starkly different from that of a traditional graduate assistantship with both academic and clinical responsibilities in the greater structure regarding academic offerings, research experiences, and clinical education opportunities. Many certified ATs have graduate degrees; however, at this time, our understanding of how an ATS selects which graduate path and why PPAT programs are more or less attractive is limited.

The benefits of PPAT programs appear to be relatively clear and copious despite a lack of empirical data: PPAT education allows the student to develop knowledge specific to the practice of athletic training,<sup>3</sup> which may not be the case for nonathletic training-focused degree programs, such as exercise physiology, sports management, or psychology.<sup>8</sup> However, it appears that many students continue to receive differing opinions on the best options for graduate study from their mentors,<sup>6</sup> and the decision process for these students is still not widely understood. Therefore, the purpose of our study was to investigate attractors to PPATs for athletic training students who were currently enrolled in such programs. Furthermore, we were interested in exploring the relationship between attending a PPAT and career intentions. This information will be useful for graduate programs in terms of recruitment, program development, and retention and useful for undergraduate program directors in counseling their students who are considering graduate school.

## METHODS

#### **Research Design**

This research study was designed to explore the factors that influence an ATS to pursue an NATA-accredited postprofessional degree in athletic training over other graduate degree programs, such as sports management, teacher education, and exercise science. Data collection followed a grounded theory approach because the major objective was to generate an understanding of how an ATS decides to attend a PPAT over another graduate program. One-on-one phone interviews were conducted because they provide the best medium for gaining knowledge from individuals who share similar social characteristics<sup>9</sup> while attempting to understand an individual's behaviors and actions.<sup>10</sup> Our purpose was to gain an appreciation for the selection process of graduate study, focusing on PPATs.

## **Participant Selection**

To gain a representative sample from the 16 NATAaccredited PPATs (data were collected during the fall of 2010), we attempted to recruit at least 1 student from each program. We were able to recruit from 12 of those programs. Data saturation occurred after 15 participants, but additional participants (n = 4) who met the criteria indicated interest and were included as a means of interpretative member checks.<sup>11</sup> Participants were recruited purposefully, by involving the program directors at the 16 PPATs. We e-mailed the program directors and asked them to forward an informational sheet regarding the study's purpose and data-collection procedures to a few of their students who matched the following criteria<sup>12,13</sup>: (1) enrolled full time at the current institution with an assistantship, (2) Board of Certification-certified AT, and (3) in the first year of graduate study and possibly interested in participating. Interested volunteers contacted the researchers directly to initiate consent and data collection.

## PARTICIPANTS

A total of 19 first-year PPAT students participated, representing 12 of the 16 accredited programs. The average age was  $23 \pm 1$  years (Table 1). Participants rated the exciting nature of the profession positively (9  $\pm$  1 on a 10-point Likert scale with 10 indicating *highly exciting nature*) and most of those who participated were positively influenced to attend a PPAT because of a mentor and the existence of such a program at their undergraduate institution. Mean scores for the Likert-scale items are provided in Table 2.

## **Development of Interview Protocol**

Based on the purpose, research agenda, and limited knowledge on the topic, we developed a series of questions, using a semistructured, open-ended format. This format was selected for the flexibility it afforded to further explore the topic,<sup>10</sup> particularly because of the limited empirical data regarding the concept.<sup>11</sup> After several brainstorming sessions, we completed an initial interview protocol and shared it with 2 researchers who had qualitative research experience and knowledge in the theoretical background of professional socialization. The reviewers evaluated the

#### Table 1. Individual Participant Demographics

			Postprofessional Athletic Training Program at
Name	Sex	Age, y	Undergraduate Institution?
Abby	Female	24	No
Addison	Female	24	Yes <sup>a</sup>
Brett	Male	23	Yes
Carrie	Female	22	No
Carter	Male	23	Yes
Jake	Male	23	Yes <sup>a</sup>
Jessica	Female	22	No
John	Male	22	No
Kelly	Female	23	Yes <sup>a</sup>
Lesley	Female	22	No
Mark	Male	22	No
McKenna	Female	22	Yes <sup>a</sup>
Melanie	Female	24	No
Michele	Female	22	Yes <sup>a</sup>
Sadie	Female	23	Yes <sup>a</sup>
Samantha	Female	22	No
Sarah	Female	23	No
Tate	Male	23	Yes <sup>a</sup>
Tyler	Male	22	No

<sup>a</sup> Graduate athletic training curriculum was offered, but program was not accredited by the National Athletic Trainers' Association.

interview protocol for question clarity, interpretability, nonleading questions, and content. After the review, adjustments were made to the interview guide accordingly. Two students enrolled in a nonaccredited PPAT program (ie, nonaccredited athletic training master's degree program) and 1 student enrolled in an accredited PPAT program completed a small pilot study. This allowed us to determine the flow of the interview session, appropriateness of the instrument, and overall clarity of the interview protocol. Small changes were made to the interview guide, including order, wording, and the addition of a question (Appendix 1). Data generated from the pilot study are not included in our article but did support the emerging themes present.

#### DATA COLLECTION AND DATA ANALYSIS

Before data collection, participants consented and completed a brief background questionnaire (eg, age, undergraduate institution, NATA district). Participants were also asked to answer several Likert-scale questions (responses: 1 = poor to 10 = excellent) regarding characteristics of the profession (see Table 2) before the interviews. This step was included to help quantify the PPAT student's perspectives on the profession and to support data generated in the interviews. All interviews were conducted at the convenience of the participant during the fall semester and lasted approximately 30 minutes. All interviews were digitally recorded and transcribed verbatim. All participants were assigned pseudonyms for data reporting.

Data analysis followed the grounded theory approach as outlined by Strauss and Corbin.<sup>14,15</sup> Using the purpose and research questions as our guide, we conducted the initial analysis by placing similar interview data into common categories (open coding) by reading and reviewing the transcripts. The initial categories were examined, compared, and reorganized when necessary (axial coding). All categories were then integrated and linked to develop a

## Table 2. Responses to Questions on Characteristics of the Profession

Question	Mean $\pm$ SD (1 = poor, 10 = excellent)
Hours worked/wk	4 ± 2
Work-related stress	5 ± 2
Ability to balance life	
(eg, work, school, personal time)	5 ± 2
Career progression	
(eg, chances for advancement)	7 ± 2
Income (related to work demands)	3 ± 1
Prestige of the athletic training profession	
(opinion outside profession)	5 ± 2
Excitement for future in athletic training	9 ± 1

theoretical framework to explain the decision-making process for selection of a PPAT (selective coding). The 2 researchers independently coded the data, as described earlier, and discussed the findings once completed. The independent coding was consistent between the researchers, so negotiation was not needed.

## **Credibility of Data**

Trustworthiness of the data was secured using the following methods: (1) participant transcript checks, (2) participant interpretative verification, and (3) multiple analyst triangulation. Once the interviews were transcribed, all participants reviewed the transcripts for accuracy. They were allowed to correct, edit, and add items as necessary to establish credibility of the transcripts. Upon completion of the data-analysis process, 4 participants were asked to review the interpretations of the data. As mentioned previously, these participants were interviewed after data saturation but were utilized for interpretative verification. This step allowed the participants to verify the themes and the plausibility of the initial findings evaluated by the researchers and reduce research bias. The 2 researchers conducted separate analyses, as described previously, and compared their findings.

## RESULTS

At the outset of the study, we had 2 central research questions: why do athletic training students select one PPAT over other programs, and what factors influence the final decision to attend a PPAT? These questions guided the analysis. From the data, 4 main themes emerged to answer our first research question (Figure 1), and 3 emerged to explain our second (Figure 2). Each theme is discussed below with supporting quotes from the participants.

## Reputation

*Reputation* refers to the prestige or overall quality of the program as viewed by those within the athletic training profession. The reputation of the PPAT was discussed by many as an important factor when deciding on graduate schools and degree programs for several reasons, including professional growth and career goals. Melanie stated simply, "I knew I wanted to get my master's. . . I knew [school A] was one of the top schools. I chose based upon the reputation." Michelle discussed the importance of multiple elements, but in the end, the status of the program

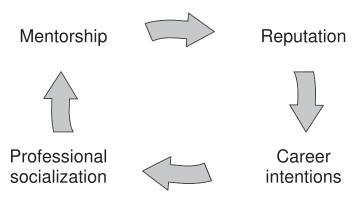


Figure 1. Initial attractors to a postprofessional athletic training program for first-year graduate students.

within the profession was important. She said, "[T]he prestige of the program and its size [were most important]." Public opinion within the athletic training community and reputation were also important to the participants because of future professional goals. Sarah was concerned with the big picture and commented

Part of the reason you go to graduate school is to make sure that when you graduate after 2 years that you have a lot of connections and that the degree [you worked hard to get] carries some weight behind it. Coming from an accredited program, especially the way things are changing in the profession, says a lot more than coming from one that is not accredited. Especially if you want to work at the collegiate level which I want to do.

Carrie echoed Sarah's thoughts regarding reputation and the benefits of attending a strong, well-known program:

I wanted a very reputable program to go into because I knew it would look very good on my resume. The fact of having such a strong alumni program from a very well-known school is important.

#### Mark stated:

[T]he accredited programs represented the best. I just wanted to go to the best program I could, and by looking at accredited ones, I could see that there were 17 [programs or so], so I went from there.

## **Career Intent**

*Career intentions* reflect the participant's viewpoint regarding sustaining a career in athletic training. The participants discussed their enthusiasm for athletic training and the investment they were making; they knew this was their ultimate career path. Jake narrowed his decision to attend a PPAT due to his love for the profession: "I would mainly say [my reason for attending a PPAT] was. . . because I love athletic training. There is no other field that I can see myself getting into or enjoying as much." Melanie declared:

[T]here is something that I am drawn to in the field. I love athletic training, and it's definitely what I want to stay in. There was something about having more of an education in athletic training that I liked.

Sadie discussed improving her skill set because she loved her profession:

I wanted to advance my skills in athletic training only. I did not want to get into different elements of athletics [eg, sports management, administration] because I only see myself working as an athletic trainer [in the collegiate setting].

Sadie also felt that many of her classmates selected a PPAT because of their career intentions, which included a lifelong commitment to athletic training. She said, "I think many of my classmates have intentions on staying [for a long time]." Carter had a parallel thought: "People who get their master's in athletic training view it as a career. [Getting a master's degree] is a start to a future and not a beginning to an end." The qualitative data are supported by the findings of the Likert-scale items (Table 2), in which the participants highly ranked their excitement for their profession  $(9 \pm 1)$  and the chance for career progression  $(7 \pm 2)$ . Their excitement for the profession superseded the number of hours worked weekly  $(4 \pm 2)$  and the income associated with the career  $(3 \pm 1)$ , further supporting their commitment for their futures as ATs.

Samantha discussed gaining more skill sets to succeed in her career as an AT in the Division II or III clinical setting: "I am focusing on skill sets that I need to be successful in

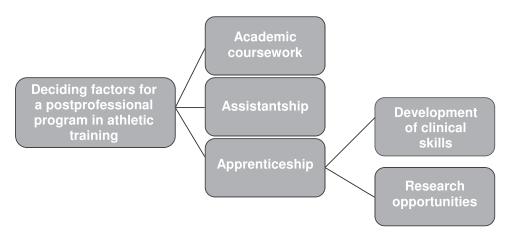


Figure 2. Postprofessional athletic training program selection factors for first-year graduate students.

my career." Jessica, too, selected a PPAT to make her more attractive to a future employer:

[I selected PPAT] to build upon the skills I was originally taught as well as getting more [focused] clinical experiences. I wanted to be more marketable [in the future] because I want to stay in athletic training.

Three of the participants also discussed hoping to continue their education to doctoral degrees, which was a strong factor in considering a PPAT. Lesley said:

I want to be a program director. . . I think about going on to get my PhD. I love the profession and being an athletic trainer, but I also enjoyed my ACIs [Approved Clinical Instructors] in undergrad, so I would like to combine clinical work with instruction of undergraduate students.

## Mentorship

Faculty and clinical instructor support was a major influence for this group of participants as a reason to select a PPAT. Mentorship was provided by both faculty and clinical instructors at the student's undergraduate program. Athletic training educators spoke highly of the PPAT itself as well as the benefits of attending a PPAT. They also helped to educate the student on the criteria for a PPAT as well as the PPAT's offerings and areas of distinctiveness. Mark stated, "The most influential factor was the advice that faculty members [during my undergraduate studies] gave me as far as which programs were the best." Abby, too, was introduced to PPATs by a faculty member and was influenced to look into a PPAT because of those discussions. She commented, "After talking to my undergraduate advisor, she broke down [all my graduate school options], and I felt that [school A] had all the components I was looking for." Michelle discussed how her [undergraduate] academic advisor, who had an understanding of the program, helped her reach a decision to attend her PPAT. She reflected:

My advisor, who had been to the campus and was connected to the faculty, really made me feel comfortable. She had an understanding of my needs as well as the program's offerings that really helped me make a decision.

Another component of the mentorship theme centered on the existence of a PPAT at the participant's undergraduate institution or a clinical instructor or faculty member who had attended a PPAT. Nine participants were positively influenced to pursue a PPAT because of their undergraduate experiences, in which they were exposed to a postprofessional education program (only 2 were accredited by the NATA). Jessica discussed seeing how the PPAT at her school was run and wanting a similar experience during her graduate studies: "[My former school] had PPAT classes, so I was used to the structure. So I knew I wanted to stay in athletic training and get the same kind of education." Abby directly related her interest and eventual decision to attend her PPAT to the influence of a clinical instructor. She reflected: I had a mentor last year, during my internship, who talked a lot about his former program. He had nothing but good things to say about the program and his decision to attend a PPAT. His influence was one of the deciding factors.

Samantha also capitalized on her clinical instructor's knowledge and previous experiences with graduate school as an aid in her decision making. She said, "I talked to my ACIs because over half of them went through PPATs, so they were great resources." Carrie also selected a PPAT based on a recommendation from a supervising clinical instructor: "I considered [my school] because my head AT received his master's degree from the school, and he spoke highly of the program."

## **Professional Socialization**

*Professional socialization* is operationalized by the results of this study as formalized, hands-on training related to the professional practice of athletic training. The participants felt as though an advanced degree in athletic training would help them be more prepared to handle the responsibilities of a full-time AT, especially because they felt as though there was more to learn. Take Samantha's reasons for graduate school:

My decision to go to graduate school was based upon my feelings that I did not know everything that I could possibly know. There is so much more to learn about the medical aspect of athletic training. . . I personally feel that, in our profession, there is so much more to learn [and understand] than what we are exposed to during our undergraduate [schooling]. So 2 more years of graduate school would really prepare me for going out [into the workplace] as an AT.

Abby said, "I wanted to expand my basic knowledge of athletic training, and I feel like I will be a stronger athletic trainer for choosing a degree program in athletic training." Tate discussed the importance of gaining more experiences he will use in the future. He noted:

I wanted something in the realm of athletic training to continue my education. I wanted to get better. What I have realized in these past few months is that undergraduate prepares you stress wise and provides you with the bare minimum. So, why not continue your education in order to get better [at your job]?

Jessica, too, believed that she had advanced her skills through her experiences in a short period of time: "I feel like I can apply more of my athletic training skills when I am at my clinical experience because I have already learned a bit more, even though I have only been here 2 months." Carter followed up by stating:

There is a definite need for graduate programs [PPATs] because just because you pass the BOC [Board of Certification] exam does not mean you are completely ready to be a full-time AT. There is still plenty more to learn [specifically in athletic training].

Continued professional development was a major impetus for this group of participants to attend a PPAT because it provided on-the-job training but with an educational component tied to the experience. Sadie summarized the theme of professional socialization:

I really like having my own team and having that one team to be responsible for and to deal with. I am doing everything with them [travel, rehabilitation development, etc]. I am able to see the whole process from start to finish; I am evaluating the injury, treating it, and helping them return to play. It is what I love about athletic training, and I am getting that opportunity [to get better] here now at my PPAT.

## Academic Offerings

Many of the participants discussed the importance of the PPAT's academic offerings. They recognized the need to advance their entry-level knowledge beyond their undergraduate studies. Michelle discussed the attraction of gaining more knowledge that she could apply in the future:

I selected PPAT over sports psychology because I would be able to use my experiences in my clinical life and throughout my career. [A degree in athletic training] would, in the long run, be more helpful for skill development and my care of my athletes.

Mark noted the strength of the academic program as the major reason why he selected one program over another: "It ended up being the academic side of things. The academic program [here at my current school] was so much stronger compared to other programs." Mark also was cognizant of the evolution of the academic requirements, such as those of the physical therapy profession, so his decision to attend a PPAT was also driven by the need for more specialized training. He said:

[Athletic training] is growing and getting bigger. I think that we are going to get to a point where a master's degree will be the minimum requirement to practice. That [notion] played a strong influence in my decision, I knew that I needed to get a master's degree in athletic training. Four years really isn't enough to cover all the material and really be good at what you can do; that is why I wanted 2 more years of learning.

Addison was guided specifically by the academic makeup of the athletic training program:

I worked for 2 years as an AT, so I had the time to think about what I wanted from my education. I was looking for 2 specific areas, which were outlined in my current program's academic requirements.

Samantha and Carrie were also driven by the course offerings of the PPAT. Carrie said, "[My school] had a lot to offer with their academic program, and there was a wide range of classes that were very interesting." Samantha said simply, "I [looked] at what courses they offered [that were very important to me]."

#### Assistantships

When discussing the factors that influenced their final decisions regarding which PPAT to attend, most participants vocalized the need for an assistantship that provided 2 major elements, financial support and a clinical experience, which can help foster professional development and skill advancement. Carter boldly stated, "I was looking for the assistantship [my clinical assignment] and the stipend/ tuition waiver." Tate, too, wanted a degree program that helped support his pursuit of a graduate degree: "[I was looking for] the degree program and the stipend [package] as I did not want to have to pay [a ton] for continuing my education." Carrie discussed the importance of gaining more competence with her clinical skills, "I knew I wanted a PPAT; it was important for me to have a sound PPAT program, so I could build upon my clinical experience from the undergraduate level." Lesley's reflections best summarized those thoughts expressed by all the participants:

I wanted to be at a PPAT, and I wanted it combined with a graduate assistantship position because I did not want to get my degree without gaining advanced clinical experiences, and I needed financial support, too.

Participants were clear on the importance of a clinical assistantship as a means of fiscal support for continuing education while they continued to mature clinically.

#### Apprenticeship

The apprenticeship theme represents the participants' interest in gaining more experiences with their clinical skills and the principles of research and data collection through supervision and support from experienced researchers and clinicians. Apprenticeship was a component of a clinical assistantship but was independent from the previous theme in terms of receiving continued feedback and guidance regarding their skill sets. In essence, the participants viewed the graduate assistantship position as the option to practice clinically but with continued mentorship from full-time staff members. Take Brett's comments:

It is my clinical experience that will make me more ready because I am very much on my own when I am working with my team. I have a supervising AT, but he is very hands off with me because he has his own team to worry about, and he doesn't feel the need to be looking over my shoulder [but is there if or when I need help or support].

McKenna discussed gaining self-confidence along with advancing her clinical skills through her PPAT:

I wanted to get more in depth with things [clinically] I learned and expanding my [existing] knowledge. I think even just confidence wise and just the amount of [different] techniques I have been able to use, I think it will help me be successful [in the future]. This program gives you the extra few years of learning [while doing] from others while also being able to find your own style and ways of doing things that work best for you.

Other participants, although wanting clinical experience, expressed the importance of having research experience. Two factors seemed to drive this: completion of a thesis project and the potential to pursue a doctoral degree. Sarah said, "I was really looking for a graduate program that would allow me to write a thesis, so the research aspect was very important to me." Like Sarah, Carter and John wanted the option to write and complete a thesis project. Carter stated, "I did like the fact that there was a thesis option for me. I wanted the ability to take my skills [research] learned in the undergraduate level to the next step." Tate was concerned with the type of research in addition to the ability to conduct research: "definitely the type, ability, and the quality of the research projects [were] important for me." Several participants, including Tate, were motivated to attend a PPAT for the possibility of one day obtaining their doctoral degrees. He said:

I really like the research [component of athletic training], and maybe someday I will want to continue on for my PhD. I am not sure yet, but I do know that my experience at my PPAT is a huge help.

Sarah, too, has aspirations for a PhD and believes her experiences at her PPAT can help her: "Eventually I might want to pursue some research interests or a PhD." Jessica captured the heart of the PPAT experience:

I think [by more students getting an advanced athletic training degree] and not. . . other degrees that our credentials as athletic trainers are going to be higher. The more who pursue an advanced degree, there will be more research, so we can teach and educate others about athletic training through that research.

#### DISCUSSION

Recent graduates pursue postprofessional educational training for many reasons, including a deeper appreciation for the skills of an AT,<sup>5</sup> potential for career advancement,<sup>5,8</sup> and pay.<sup>8</sup> These graduates are often influenced to attend graduate school as a result of mentorship from their undergraduate faculty, staff, and clinical instructors<sup>16</sup> as well as the desire to gain additional experiences in a more supervised capacity.<sup>2</sup> Many graduates are electing to pursue a higher degree with an associated assistantship; however, little information is available regarding their selection process. Information regarding this selection process can help educators and clinical instructors assist graduates as they navigate the process of applying to and selecting graduate programs. Although ATs pursue diverse graduate programs of study, we focused primarily on the attractors to the PPAT. Our results support previous findings that graduates of PPATs are generally satisfied with their experiences, particularly as related to the development of critical thinking skills and depth of learning.<sup>17</sup> Neibert<sup>18</sup> noted that those who attend PPATs were able to develop an increased understanding of the fundamentals of athletic training through clinical practice, research experience, and positive learning environments, aspects our participants were looking forward to experiencing.

#### Attractors to PPATs

At the outset of the study, we were concerned with how recent graduates selected a PPAT and what attracted them to the PPAT over another degree program. For this group of participants, 4 major factors seemed to influence this decision: the reputation of the program or program faculty (or both), individual career intentions, professional socialization, and mentorship received from academic faculty and clinical instructors. It is not surprising that the reputation of the PPAT played an instrumental role in attracting a student, because academic reputation has long been found to be an important selection criterion for US colleges.<sup>19,20</sup> Similar to our findings, other authors focusing on college choice have linked financial costs<sup>20,21</sup> and counsel from support networks, such as parents, teachers, and guidance counselors, as major contributors to college selection.<sup>21–23</sup> Attending an accredited PPAT with a strong reputation within the athletic training community was an important criterion for this group of first-year graduate students, who firmly linked future professional career goals with attending a PPAT. Networking can be an integral part of professional development and career advancement,<sup>24</sup> making this emergent theme very realistic and important for this group of novice professionals. Furthermore, reputation of the program was partly influenced by the PPAT faculty, who were individuals highly respected within athletic training for their contributions to advancing the profession. When examining college choices of student-athletes, Letawsky et al<sup>25</sup> found that the reputation of the head coach was 1 of 5 influential factors in the final selection. This result offers parallels with our study: the reputation of the coach is related to the success and prestige of the college and the athletic program. Similarly, the reputations of PPAT faculty members are related to the PPAT's success and prestige. Comparable views are held by physicians, who often apply to fellowships because of the prestige of the instructors or program.<sup>26</sup>

The decision to pursue a postprofessional graduate degree in athletic training was also driven by the participants' viewpoints on a career in athletic training. All were firm in their passion for their chosen field and wanted their graduate education to be meaningful and to help foster clinical expertise through critical thinking, additional clinical experiences, and research opportunities. Meaningful experiences, educationally and clinically, have been linked to the development of expert ATs<sup>27</sup>; these experiences allow the clinicians to develop their clinical skills and recognize parallels among situations, which in turn increases learning and application of knowledge. Interestingly, the authors<sup>27</sup> studied ATs with an average work experience of 29 years, indicating the steadfast career intentions of those professionals. Continued professional development as a way to increase marketability for a career in athletic training has also been linked to the postgraduation decisions of senior ATSs because graduate education is a means to develop the skills necessary to succeed in the profession.<sup>2</sup> Our results are also consistent with the literature regarding fellowship training in the medical field. Many physicians pursue advanced fellowship training as a way of developing stronger clinical skills and increased marketability.<sup>28</sup> The desires for continued professional development and increased marketability align with the purpose and philosophy of graduate education in athletic training, which is aimed at expanding the knowledge of entry-level clinicians and providing them with the ability to develop competency in teaching, administration, or re-

search skills.<sup>3</sup> As reported by several authors,<sup>2,6,7</sup> retention in the athletic training profession postgraduation is often influenced by encouragement from athletic training faculty and mentorship received from a clinical instructor, both of which occurred with this group of graduate students. Mentorship has been consistently documented in the athletic training literature as a critical component of the professional socialization of the athletic training student and entry-level professional.<sup>29-31</sup> The undergraduate student who receives strong mentorship from a clinical instructor who is vested in both the profession of athletic training and his or her own professional development and continues to encourage the student to develop skills is more likely to be influenced to pursue further education in athletic training. The importance of mentorship also guides career choices among those in academic medicine:<sup>32</sup> a mentor who conveys the joy of the position and promotes the profession is likely to have a positive influence on the mentoree.<sup>33</sup> In our study, mentors also helped educate students on the purpose of postprofessional graduate study and the benefits of attending a PPAT; in some cases, the mentor helped the student make an informed decision as to the best PPAT for his or her personality, needs, and professional goals. Furthermore, clinical instructors who attended a PPAT and were satisfied with their experiences were more encouraging to a student's pursuit of an advanced degree in athletic training. Relationships such as these are important for the profession. As more individuals attend PPATs and develop advanced expertise within athletic training, they will encourage others to pursue similar paths. With more and better qualified athletic trainers, our profession's status within the health care world will be enhanced.

A unique finding of our study was the influence of an existing NATA-accredited PPAT or postprofessional program that focused on advanced athletic training knowledge at the undergraduate institution, which appeared to positively influence graduates to pursue a similar curriculum and clinical experience. Many ATSs interacted with former PPAT students, who in some cases served as clinical instructors mentoring the ATSs. Although not all of the programs were NATA accredited, they did offer similar academic offerings, clinical experiences, and research components, elements of postprofessional athletic training education. Some of our participants were able to witness the inner workings, program structure, and academic offerings of a PPAT, perhaps sparking their interest in graduate athletic training education. The graduates wanted the same opportunities provided to their clinical instructors and other ATSs because of this influence of mentorship. Moreover, we know that PPAT graduates are satisfied with their educational experiences,<sup>17</sup> and therefore, the discourse between the mentor and the mentoree about those experiences can influence the ATS's final decision.

Another very important attractor to a PPAT was the opportunity to gain more experiences as an AT within a supervised learning environment. Similar to the ATSs in the study by Neibert,<sup>18</sup> although our participants had the knowledge and skills of entry-level ATs, they wanted the opportunity to continue to develop their skills and learn from their successes as well as mistakes in a supportive environment without the pressures of being considered full-time practitioners. Some surgeons have expressed similar

desires to gradually increase their responsibilities after their residencies and have pursued fellowship programs with that intent.<sup>26</sup> In essence, the PPAT offers a more formalized inductance into the profession of athletic training, as opposed to the more informal process that can occur when a graduate student assumes the role of the graduate assistant while pursuing a graduate degree not directly linked to the assistantship position. Role inductance is a critical component of the professional socialization process of the athletic training professional,<sup>30,34</sup> yet before certification, the ATS is limited in the ability to fully assume the roles of a certified AT because of accreditation standards and guidelines for clinical supervision. The selection of a PPAT serves as the next step in the role inductance into the profession of athletic training, comparable with the medical model of the residency and internship requirements as the physician gains valuable work experience through a supervised full-time position. Our results indicate that a mentor or clinical instructor can, in fact, influence a student's decision to pursue a PPAT, which is consistent with other research examining the postgraduation decisions of ATSs.2,16

## Selection of a Specific PPAT

Once the decision was made to pursue a PPAT program, several factors appeared to influence the final selection of the individual program, including academic course offerings, type of assistantship, and advancement of skill development through apprenticeship. Degree offerings are consistently reported as the most influential factor related to the choice of undergraduate college selection, so these are also a natural driving force behind graduate school selection.<sup>25</sup> Specifically, this group of first-year graduate students wanted the opportunity to expand their entry-level knowledge in an area that could help them mature professionally; they did not see the need to gain a diversified experience but preferred a more focused area of athletic training. Seeking advanced clinical training has been a longstanding factor influencing the decision to attend graduate school,<sup>35,36</sup> and more recently, the quality and type of the degree program have emerged as key deciding factors.<sup>36</sup> Again, as previously mentioned, the opportunity to attend a PPAT allows young clinicians to gain a more structured, formal inductance into their professional work roles, rather than assuming the expectations of a full-time certified AT without support from peers or mentors. This finding is consistent with the work of Neibert,<sup>18</sup> who noted that learning in a low-pressure, lowconsequence environment is important for the professional development and maturation of the novice clinician. This learning environment often occurs through structuring of the clinical experience, which limits the hours spent working clinically and recognizes the dual role of the AT as a student and health care provider.

The curricula offered by these PPATs were also important to some of the first-year graduate students in allowing them to develop an appreciation for a specific area within athletic training that could help them when providing care for their athletes. The areas of distinctiveness were not discussed by many participants, but it was apparent that the PPATs' course offerings and academic structuring were important in attracting students, and in essence, they reflected areas of specialty. Developing an area of specialization is a critical component of graduate education, and in the minds of some athletic training professionals,<sup>18</sup> this is the missing link in advancing the profession within the health care community. Specialized education is also an attractor to advanced fellowships in the medical field.<sup>26</sup> When mentoring undergraduates or recruiting potential students, athletic training educators and PPATs, respectively, should continue to highlight the program's uniqueness and areas of study in order to help with recruitment.

The financial costs related to graduate education were also an important factor for many of these first-year graduate students. Financial factors have been consistently reported to affect undergraduate college selection<sup>20,21</sup> and more recently have also been linked to graduate education selection.<sup>36</sup> For our participants, graduate assistantships served multiple purposes but were mainly a way of supporting their academic endeavors while gaining more real-life experiences on the job. This is an important finding because increased tuition costs are causing many undergraduate students to accrue more debt than in the past. The ability to practice clinically was also essential for the group, as it allowed them to continue to develop their existing skills but also gain a new set of clinical skills. Advancing technical skills and abilities have been previously reported in the graduate education literature as major factors influencing the decision to pursue advanced educational training.<sup>35,36</sup> Our results, in combination with the recent work of Gavin et al,<sup>2</sup> suggest that continued development is important for the novice athletic training professional. Equally important was the participants' desire to gain understanding and mentorship regarding the research process, a fundamental component for postprofessional graduate education in athletic training.<sup>3</sup> Competence and interest in scholarship will serve as the necessary catalysts to solidify athletic training's worth in the health care system: the wishes of several participants to pursue terminal degrees demonstrate promise for the future.

#### Limitations

Our results reflect only the opinions of a small portion of graduate students enrolled in PPATs across the country. Although we recruited from all NATA-accredited PPATs, not all programs were represented, and therefore, the data cannot be generalized to all graduate students and programs. Moreover, the results of the study can only be applied to those students enrolled in PPATs and may not reflect the beliefs or career goals of those who selected other means for graduate study. Future researchers should continue to investigate the career intentions of recent graduates as an effort to continue to retain more students. Furthermore, future authors should continue to examine the role mentorship plays in the professional development of an AT, the potential it has to influence an AT (either negatively or positively), and the type of mentorship program that is most effective for the parties involved in the process.

#### CONCLUSIONS

Recent undergraduates who pursued a degree from a PPAT did so in order to gain more advanced training; they

view athletic training as a career and are excited for their futures as ATs. Many of the participants capitalized on resources, such as the NATA Web site, current or past clinical instructors, and academic advisors, when investigating graduate programs. However, when initiating the search, many did not fully understand the purpose of the PPAT. It is important for educators and mentors to educate students on PPAT education as well as other degree options so they can make informed decisions on graduate studies. As more PPATs are developed and gain accreditation status, educators and students will understand that these programs offer the opportunity to continue professional development in an autonomous, yet supportive, learning environment. Pursuit of a PPAT degree is not aimed simply at revisiting previously learned materials but is a means to develop mastery and advance knowledge within the field of athletic training.

Mentorship was both a critical link in a graduate's decision to pursue a PPAT and a final determinant in selection of a PPAT. Although we did not report these results, several participants discussed negative responses to their decisions to pursue advanced degrees in athletic training. This reluctance to support the decision came from a variety of individuals but mostly from peers and clinical instructors, and it was similar to the comments discussed by Ingersoll and Gieck<sup>8</sup> regarding pursuit of graduate education in athletic training. If the profession is to continue to grow and garner more prestige and recognition, it is important for recent graduates to consider pursuing advanced degrees in athletic training to help develop more expert clinicians and enhance the skills of future researchers.<sup>5</sup> A larger number of expert ATs can only help the profession obtain the goals set forth in the NATA's strategic plan, which includes securing the status and reputation of the profession among health care professionals and in the public sector.

## REFERENCES

- Member statistics. National Athletic Trainers' Association. http:// www.nata.org/members1/documents/membstats/2008eoy.htm. Accessed November 20, 2010.
- Gavin KE, Mazerolle SM, Pitney WA, Casa DJ. What influences senior undergraduate athletic training students career decisions post graduation? *J Athl Train.* 2012. In press.
- 2007 standards for the accreditation of post-certification graduate athletic training education programs. National Athletic Trainers' Association Graduate Education Council. http://www.nata.org/sites/ default/files/pursuing-maintaining-accreditation.pdf. Accessed November 22, 2010.
- Delforge GD, Behnke RS. The history and evolution of athletic training education in the United States. J Athl Train. 1999;34(1):53– 61.
- Sauers EL. The future of post-professional education in athletic training. Presented at: National Athletic Trainers' Association Athletic Trainers' Educators Conference; January 12, 2007; Dallas, TX.
- Bowman TG, Dodge TM. Factors of persistence among graduates of athletic training education programs. *J Athl Train*. 2011;46(2):665– 671.
- Goodman A, Mensch JM, Jay M, French KE, Mitchell MF, Fritz SL. Retention and attrition factors for female certified athletic trainers in the National Collegiate Athletic Association Division I Football Bowl Subdivision setting. *J Athl Train*. 2010;45(3):287–298.

- Ingersoll CD, Gieck JH. Issues and outcomes in graduate education. Presented at: National Athletic Trainers' Association Athletic Trainers' Educators Conference; January 9–11, 2005; Dallas TX.
- Pitney WA, Ilsley P, Rintala J. The professional socialization of certified athletic trainers in the National Collegiate Athletic Association Division I context. J Athl Train. 2002;37(1):63–70.
- Seidman I. Interviewing As Qualitative Research: A Guide for Researchers in Education and the Social Sciences. 3rd ed. New York, NY: Teachers College Press; 2006.
- 11. Pitney WA, Parker J. *Qualitative Research in Physical Activity and the Health Professions*. Champaign, IL: Human Kinetics; 2009.
- Patton MQ. Qualitative Evaluation and Research Methods. 2nd ed. Newbury Park, CA: Sage; 1990:176–177.
- 13. Creswell JW. Qualitative Inquiry and Research Design: Choosing Among Five Traditions. Thousand Oaks, CA: Sage; 1998.
- Strauss A, Corbin J. Grounded theory methodology. In: Denzin NK, Lincoln YS, eds. *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage; 1994:273–285.
- Strauss A, Corbin J. Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory. 2nd ed. Thousand Oaks, CA: Sage; 1998.
- Neibert P, Huot C, Sexton P. Career decisions of senior athletic training students and recent graduates of accredited athletic training education programs. *Athl Train Educ J.* 2010;5(3):101–108.
- Henry KJ, Van Lunen BL, Udermman B, Onate JA. Curricular satisfaction of National Athletic Trainers' Association-accredited postprofessional athletic training graduates. *J Athl Train*. 2009;44(4):391–399.
- Neibert PJ. Novice to expert practice via postprofessional athletic training education: a grounded theory. *J Athl Train*. 2009;44(4):378– 390.
- Spies RR. The Effect of Rising Costs on College Choice: A Study of the Application Decisions of High-Ability Students. Princeton, NJ: College Entrance Examination Board; 1978.
- Hu S, Hossler D. Willingness to pay and preference for private institutions. *Res High Educ.* 2000;41(6):685–701.
- Seveir RA. Recruiting African-American undergraduates: a national survey of the factors that affect institutional choice. *College Univers*. 1993;68(1):48–52.
- 22. Galotti KM, Mark MC. How do high school students structure an important life decision? A short-term longitudinal study of the

college decision-making process. *Res High Educ.* 1994;35(5):589-607.

- Canale JR, Dunlap L, Brin M, Donahue T. The relative importance of various college characteristics to students in influencing their choice of a college. *College Stud J.* 1996;30:214–216.
- 24. Mensch JM. The good old boys network: sponsored mobility in athletic training. *Athl Ther Today*; 2004;9(5):50–51.
- Letawsky NR, Schneider RG, Pedersen PM, Palmer CJ. Factors influencing the college selection process of student-athletes: are their factors similar to non-athletes? *College Stud J.* 2003;37(4):604–609.
- Lagwinski N, Hunt JL. Fellowship trends of pathology residents. Arch Pathol Lab Med. 2009;133(9):1431–1436.
- Malasarn R, Bloom GA, Crumpton R. The development of expert male National Collegiate Athletic Association Division I certified athletic trainers. *J Athl Train*. 2002;37(1):55–62.
- Grover BT, Kothari SN, Kallies KJ, Mathiason MA. Benefits of laparoscopic fellowship training: a survey of former fellows. *Surg Innov.* 2009;16(4):283–288.
- Pitney WA. Organizational influences and quality-of-life issues during the professional socialization of certified athletic trainers working in the National Collegiate Athletic Association Division I setting. J Athl Train. 2006;41(2):189–195.
- Pitney WA, Ehlers GG. A grounded theory study of the mentoring process involved with undergraduate athletic training students. *J Athl Train*. 2004;39(4):344–51.
- Curtis N, Helion JG, Domsohn M. Student athletic trainer perceptions of clinical supervisor behaviors: a critical incident study. *J Athl Train.* 1998;33(3):249–253.
- Sambunjak D, Straus SE, Marusic A. A systematic review of qualitative research of the meaning and characteristics of mentoring in academic medicine. *J Gen Intern Med.* 2010;25(1):72–78.
- Singletary SE. Mentoring surgeons for the 21st century. Ann Surg Oncol. 2005;12(11):848–860.
- 34. Tierney W G, Rhoads R A. Faculty Socialization as a Cultural Process: A Mirror of Institutional Commitment. Washington, DC: The George Washington University, School of Education and Human Development; 1994. ASHE-ERIC Higher Education Report 93–6.
- Stoecker JL. Factors influencing the decision to return to graduate school for professional studies. *Res High Educ.* 1991;32(6):689–700.
- Kallio RE. Factors influencing the college choice decisions of graduate students. *Res High Educ*. 1995;36(1):109–124.

Address correspondence to Stephanie M. Mazerolle, PhD, LAT, ATC, Department of Kinesiology, University of Connecticut, 2095 Hillside Road, Storrs, CT 06269. Address email to stephanie.mazerolle@uconn.edu.