

Evaluating Perceptions of Culminating Clinical Education Experiences of Senior Athletic Training Students

Patricia A. Aronson, PhD, ATC*; Thomas G. Bowman, PhD, ATC*; Stephanie M. Mazerolle, PhD, ATC†

*Athletic Training Department, Lynchburg College, VA; †University of Connecticut, Storrs

Context: The perceptions of athletic training students (ATs) regarding their clinical education experiences are not fully understood. It is important to investigate ATs' perceptions of clinical education to allow athletic training educators to provide educational experiences that will maximize learning.

Objective: To determine what ATs value during their clinical education experiences.

Design: Qualitative study.

Setting: Participants completed an electronic preceptor evaluation.

Patients or Other Participants: Nineteen (14 female, 5 male; average age = 22 ± 1 years) senior ATs over 2 years enrolled in a Commission on Accreditation of Athletic Training Education–accredited athletic training program participated in our study. Participants came from 1 Commission on Accreditation of Athletic Training Education–accredited athletic training program in the Mid-Atlantic region.

Data Collection and Analysis: We asked seniors to evaluate their final clinical education experience by completing an open-ended questionnaire. We analyzed the data following the principles of grounded theory. We negotiated over the coding scheme until we reached full agreement, performed a peer review, and conducted member checks to ensure trustworthiness of the results.

Results: Three major themes emerged from the data. Athletic training students enjoy interacting with preceptors who act as *appropriate professional role models*. Our participants also found value in being able to develop their clinical skills with *appropriate situational supervision*. Finally, ATs appreciate when preceptors teach them new information by stimulating their *critical thinking skills*.

Conclusions: To help provide positive learning environments for senior ATs, athletic training education administrators should select preceptors who can successfully model professional responsibilities, present ATs with authentic learning experiences, and promote higher-level thinking. We believe providing ATs with exposure to preceptors who can meet these criteria may better prepare students for professional practice, alter persistence decisions, and should be a goal of clinical experiences for the benefit of ATs.

Key Words: Preceptor, mentor evaluation instrument, role modeling, feedback

Dr Aronson is currently a professor in the Athletic Training Department at Lynchburg College. Please address all correspondence to Patricia A. Aronson, PhD, ATC, Athletic Training Department, Lynchburg College, 1501 Lakeside Drive, Lynchburg, VA 24501. Address e-mail to aronson@lynchburg.edu.

Full Citation:

Aronson PA, Bowman TG, Mazerolle SM. Evaluating perceptions of culminating clinical education experiences of senior athletic training students. *Athl Train Educ J*. 2015;10(3):219–226.

Evaluating Perceptions of Culminating Clinical Education Experiences of Senior Athletic Training Students

Patricia A. Aronson, PhD, ATC; Thomas G. Bowman, PhD, ATC; Stephanie M. Mazerolle, PhD, ATC

INTRODUCTION

Clinical education is experiential learning that gives students the opportunity to apply athletic training knowledge, skills, and clinical abilities on patients.¹ Clinical education is required for students completing an athletic training program (ATP) for at least 2 years.¹ Clinical education must occur under the direct supervision of a preceptor, with the majority of the experiences being supervised by a state-credentialed athletic trainer.¹ The primary objective of clinical education is to provide students with the skills and behaviors of the entry-level undergraduate professional. Clinical education also helps to socialize students into the professional roles and responsibilities of the athletic training profession,² giving them an understanding of what a career in athletic training will entail.

Previous research has investigated the socialization process of athletic training students (ATs) during clinical education experiences,^{2–5} and qualities that allow preceptors to be effective mentors have also been determined.^{3–8} Athletic training students are socialized by preceptors, patients, and peer mentors during clinical education experiences by accepting responsibility and meeting professional roles, leading to legitimization.² Students appreciate when preceptors are accepting, nurturing,⁴ accessible, and approachable,³ and when they model professional behavior.^{4,9} Athletic training students also find preceptors helpful when they are viewed as mentors.^{4,10} Further, athletic trainers serving as preceptors must show several qualities, including legal and ethical behavior, the ability to communicate effectively, appropriate interpersonal relationships, instructional techniques, supervisory and administrative proficiency, the ability to evaluate student performance, and clinical skills and knowledge.⁶

However, the perceptions of ATs regarding their clinical education experiences are not fully understood. What is known is that ATs desire a diversified experience that provides realism and strong mentorship, as this helps them visualize their future roles as athletic trainers.^{5,11,12} Despite this information, no studies have searched for an in-depth description of what ATs enjoy about their time spent engaged in clinical education. Therefore, the purpose of this investigation was to determine the perceptions of senior ATs regarding their clinical education experiences, specifically to identify what ATs value during their clinical education experiences. It is important to investigate ATs' perceptions to determine if they are the same values as those of the ATP faculty. It is also important to study ATs' perceptions for athletic training educators to provide clinical education experiences that will maximize learning based on ATs' needs. In considering the positive attributes of successful preceptors, as perceived by ATs, we can make recommendations for how preceptors can enhance student learning in clinical education settings. We were particularly interested in gaining an understanding of what helped ATs feel more prepared for professional practice. Although mentoring³ by preceptors is particularly important for the development of young profes-

sionals and supervision is important in the mentoring process as well as for accreditation standards,^{10,13–15} other successful and specific tactics used by preceptors to engage students in clinical education learning are less publicized. Our premise is that if ATs are engaged in learning during clinical education experiences, they will not only perceive it as a valuable experience, but enjoy the time spent at their sites.¹⁶ Further, we believe this will lead to persistence in the ATP and eventually to being retained in the profession.^{5,17}

METHODS

We used qualitative methods because we wanted to learn more about how ATs make meaning out of the experiences through which they live.¹⁸ Qualitative methods also allowed us to capture rich descriptions of the clinical education experiences of senior ATs in a complete and adaptable manner.¹⁹ Specifically, we used a case study design to evaluate our purpose. As recommended by Yin,²⁰ we bound our study by time and context, which specifically included senior ATs who were evaluating their final clinical education experience upon completion at a particular institution in the Mid-Atlantic region. Our boundaries, ultimately the inclusionary and exclusionary criteria listed above, helped us focus our investigation and analysis of the data.

Participants

Athletic Training Students. We analyzed data from a convenience sample of 19 ATs (14 female, 5 male; average age = 22 ± 1 years) gathered from 2 separate graduating classes over a 2-year period. Eight seniors (6 female, 2 male) from 1 cohort and 11 seniors (8 female, 3 male) from the subsequent cohort evaluated the preceptor who supervised their final clinical education experience. Data saturation drove recruitment; therefore, we ceased after 19 participants as no new themes developed during our regular reviews of the data. We collected data from a preceptor questionnaire completed by the ATs after completion of his or her final clinical education experience in an ATP. The preceptor instrument is used in this ATP to evaluate clinical education experiences by all ATs; however, we were particularly interested in senior ATs. We selected those ATs who had completed 3 years of clinical education, giving them several experiences engaged in clinical education to draw on when completing the questionnaire.

Program Characteristic. The single program studied is a Commission on Accreditation of Athletic Training Education (CAATE)-accredited undergraduate ATP at a private institution in the Mid-Atlantic region. In this ATP, ATs complete gateway coursework and clinical observation during their first semester of college during the preprofessional phase of the ATP. Prospective ATs apply to gain formal entrance into the ATP during February of the second semester of coursework. Once admitted, the ATs complete 6 semesters of clinical education experiences during the professional phase of

Table. An Overview of the Open-Ended Questions in the Preceptor Evaluation Questionnaire

Category	Example of Subcategory Item
Student involvement and supervision	Describe your involvement during this rotation.
Clinical instructor instructional abilities	Under what circumstances did you learn the most from the preceptor?
Problem solving	How did the preceptor stimulate your problem-solving skills during this rotation?
Humanistic orientation	Describe the rapport the preceptor had with you.
Knowledge and research	How did the preceptor encourage you to research, explore, and discover the evidence-based practices of athletic training?
Role modeling and mentoring	Give an example of how the preceptor was a positive or negative role model and/or a mentor to you during this rotation.
List and comment on the preceptor's strengths:	
List and comment on the preceptor's weaknesses:	
Based on your past experience in clinical education and your concept of the "ideal" clinical education setting, how would you rate this clinical education setting, using a scale of 1–4?	<ol style="list-style-type: none"> 1. A very negative experience 2. A waste of time 3. Time well spent 4. A very positive experience

the ATP, starting during the fall of their second year. Although all ATSS in this program complete preceptor evaluations after each clinical education experience, our experience is that seniors tend to be more thoughtful and mature and to draw on past experiences when they answer the questionnaire, leading us to use only data from seniors for this particular study.

Instrumentation

In order to assess learning and ensure that sound experiences were occurring in the ATSS' clinical education rotations, we created an evaluation tool that would assist in this evaluation. The instrument contained the same questions regardless of the ATSS's academic standing or clinical assignment. We adapted our instrument from previous work, which provided suggestions for evaluating athletic training preceptors.^{7,8} We focused our instrument on finding red flags (eg, ethical and legal issues^{6,7}) that would lead us to discontinue a preceptor's service and cues that would assure us that our goals were being met, that is, that ATSS were learning from their preceptors. We also made the majority of questions open ended to promote critical thinking and reflection. The evaluation then became a thought-provoking exercise in assessing the strengths and areas for improvement of the preceptor. We pilot tested the questionnaire on 2 occasions to reduce measurement error²¹ and provide construct validity. First, we had 3 athletic training educators review the questions for content and clarity,²² followed by a review by 3 separate ATSS classes in 1 semester for clarity. We asked the faculty and students to provide feedback to improve the questions, leading to face and content validity of the instrument.²³

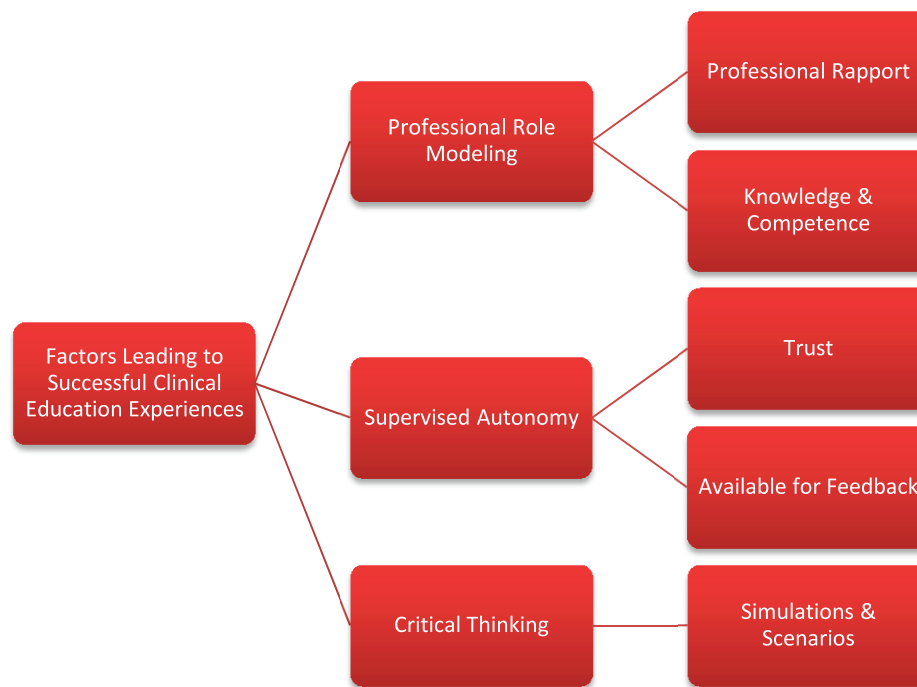
We used the final version of the questionnaire to collect data (Table). Students completed the electronic template upon the completion of their final senior clinical education experience by reflecting on the questions and providing in-depth answers. Specifically, we asked the participants to explain how and what they learned from their preceptor, to describe a situation where their preceptor taught them a valuable skill or lesson, to explain how their preceptor challenged them to think critically, and to give examples of how their preceptor was a

positive or negative role model and/or mentor (Table). We chose to collect data electronically in a mixed open-ended and Likert scale survey format instead of other traditional methods (eg, interviews) to offer ATSS flexibility regarding when they could respond, allow the participants an increased level of confidentiality, and to provide time to reflect on the question before answering.²⁴ Senior ATSS evaluated 8 different preceptors over 2 years. Five preceptors worked in a small college setting, 2 preceptors worked in the secondary school setting, and 1 preceptor worked in a National Collegiate Athletic Association Division I university with a club sport. The range of the preceptors' experience as athletic trainers was from 2 to over 20 years.

Data Collection and Analysis

Before we initiated the study, the institutional review board of the host institution deemed the research exempt from review. Upon completion of the ATSS' final clinical education experience during their senior year, we asked them to complete the questionnaire. The ATSS completed the questionnaire electronically at their convenience and submitted it to the athletic training department's administrative assistant. We protected the identity of our participants by changing each student's name to one of the most popular names in the United States according to the 1990 census²⁵ and removing all identifying information from the transcripts. We treated the student responses to the questionnaire the same way an interview would be treated in qualitative analysis.^{19–26} We analyzed the data using Atlas.ti (version 6.6.15; Atlas.ti GmbH, Berlin, Germany) following the principles of a grounded theory approach described previously.²⁷ The secondary author is an expert in qualitative analysis and the primary author is an expert in clinical education evaluation tools as an experienced clinical education coordinator. We chose grounded theory as it is useful when trying to explain patterns of behavior.²⁸ We maintained the trustworthiness¹⁹ of our results through several different processes that were selected based upon their practicality and popularity as credibility tools. First, we independently coded the data and negotiated over the coding scheme until we reached 100% agreement. We also had a colleague, an athletic training

Figure. The themes resulting from data analysis.



educator, with extensive qualitative research experience perform a peer review and verify our coding scheme. Finally, we conducted member checks by asking 2 participants to review the results and ensure the accuracy of our interpretations of the data.

RESULTS

Overall, our participants had overwhelmingly positive final senior clinical education experiences, allowing us to develop a theory for creating clinical education experiences for ATs in general. Based on our results, we believe positive clinical education experiences can be developed by carefully selecting preceptors or educating existing preceptors. Selecting and/or educating preceptors to be those who understand the needs and expectations of ATs can provide the mentoring relationship students require to continue to grow professionally. Three major themes emerged from the data to explain what ATs specifically enjoyed about their clinical education experiences and are presented in detail below and depicted in the Figure.

Professional Role Modeling

Our participants enjoyed interacting with preceptors who acted as *appropriate professional role models*. The ATs noted role modeling in the promotion of everyday professionalism while interacting with colleagues, patients, and ATs; the consistent communication with generous feedback; and the demonstration of competency as clinicians as positive characteristics of their preceptors. Lisa described her preceptor's ability to act as a strong positive role model by stating,

I will always look up to [my preceptor] as a strong role model for being able to balance anything that is thrown at [the preceptor], while still making time for [the preceptor's self] and doing things [the preceptor] enjoys.

Our participants felt as though their preceptors were professional role models by maintaining appropriate professional rapport. Mary explained the relationships her preceptor maintained and the fact that these relationships modeled professionalism.

It appeared that [my preceptor] got along great with everyone. I have a great relationship with [my preceptor] and respect [my preceptor] as much as any other professor here at [institution name]. The coaches and athletes all joked around, talked to, and enjoyed [my preceptor's] company. It appeared the [patients] trusted [my preceptor's] knowledge and didn't doubt [my preceptor] with their injury status and ability to play.

John agreed by stating,

[My preceptor] had a very professional relationship with everyone [my preceptor] encountered. The [patients] really trusted [my preceptor]. [My preceptor] and the doctor got along very well, and [the coach] had complete confidence in [my preceptor].

The participants also noted the communication they had with their preceptor as it related to strengthening their relationship. They particularly thought communication to provide feedback and improve the involvement of students was important. Betty explained how she learned by having clear expectations and receiving formative feedback.

My preceptor was great at communicating things that I needed to change after the first couple of weeks of the rotation, and I was very grateful for that. I always knew what was expected of me. If I made a mistake, we discussed it. That was nice.

Barbara believed her preceptor was a mentor because of the feedback she received.

I think [my preceptor] is a great role model because [my preceptor] will listen to all sides of a story, analyze it, and

then provide effective feedback. [My preceptor] is someone that [sic] I can talk to about anything and know I will not be judged. I know I can go to [my preceptor] with concerns and receive the best advice for any situation.

Patricia also found her preceptor's consistent communication helpful in keeping her involved in the day-to-day treatment of patients. She stated that she learned from her preceptor during "our time in the athletic training [clinic] before practice; we would sit down every day and discuss the status of an injury and talk about how we needed to change things or improve them."

The preceptors our participants evaluated also served as mentors by demonstrating professional competence and clinical athletic training skills. Jennifer stated,

Practical application of knowledge and skills was demonstrated everyday [by my preceptor]. From working with athletes in the athletic training [clinic] to helping us [the students] out when we had questions about things. This was shown through evaluation, taping, explanations, different rehabilitation styles, and working with the other athletic training staff."

Elizabeth explained how she learned from a much different situation, where her preceptor did not know how to treat a patient. The preceptor showed professional competence by researching the next step in the care of the patient. Elizabeth stated,

[My preceptor] used practical knowledge and skills a lot during practices and games, however, one thing that showed me that sometimes professionals have to look things up is when we had an injury which we had a difficult time figuring out what was actually wrong. [My preceptor] researched a lot about it and then came up with a plan to treat the injury. This showed me that it is sometimes OK to not know all of the answers. It is OK to revert back to the book to get the best care for your athlete.

Supervised Autonomy

We agree with the description of *supervised autonomy* of Sexton et al,¹⁰ which assumes direct supervision of ATSS includes mentoring and guiding them to foster independence appropriate for the skill level of the ATS. For example, second-year ATSS who have not had formal athletic training classes are directly supervised by preceptors and unable to care for patients without the preceptors' being present and physically close by. Senior ATSS, however, have completed the majority of the ATP curriculum and have been assessed on most of the proficiencies required in the curriculum. Thus, seniors are afforded more opportunities to make clinical decisions while being supervised. In this study, ATSS appreciated having opportunities to gain confidence through application of their skills when being supervised by their preceptors. Jennifer summarized this theme by explaining her professional relationship with her preceptor, which included situational supervision with professional autonomy and clinical skill implementation, when she stated,

Instead of watching [my preceptor] take the lead, I would take more of the lead myself and do what I thought was appropriate after double-checking with [my preceptor]. [My preceptor] would ask me why I wanted to do what I was

doing, not because it was wrong, but just to give myself that better understanding of why that is a good choice. I appreciated this... Also, I was able to do more on my own because [my preceptor] built that trust and rapport with me that [my preceptor] knew I would do what I was supposed/allowed to do.

Betty, like Jennifer, also enjoyed situational supervision during her clinical education experiences. She described when she learned the most from her preceptor by stating,

I learned the most when I was actually doing an evaluation with my preceptor present. I was able to ask questions, the answer was explained to me, and then the answer was shown to me on the athlete. This way I could see it. Because I am a very visual learner, this was great for me.

Elizabeth expressed this same sense of opportunity to practice her skills by describing a teachable moment:

We had a major injury during a game, and [my preceptor] allowed me to perform the special tests. It was nice to be able to feel what a positive [test] felt and looked like. I now can take that knowledge in the future when I may have the same injury again.

Finally, several participants noted the fact that the supervised autonomy they enjoyed forced them to remain engaged in health care provision. Betty stated,

[My preceptor] also has the ability to get the students involved. It is easy to be hesitant and not confident in your ability when you are a student. However, my [preceptor] does a great job in helping you feel comfortable to get involved.

Elizabeth agreed by responding, "[My preceptor] doesn't allow a day where the student can just sit there and not be involved."

Critical Thinking

Finally, our participants appreciated when their preceptors stimulated their *critical thinking skills* as they encouraged clinical application and integration of didactic knowledge. Previous research has shown that thinking critically allows students to solve clinical problems.²⁹ When asked how their preceptor challenged them to think critically, our participants listed multiple situations with the majority requiring them to solve clinical scenarios effectively. Elizabeth summarizes how her preceptor challenged her while integrating new skills and thus helped her learn on a daily basis through experiences and through discussions. When asked how her preceptor stimulated her ability to think critically, she said,

[My preceptor] is very good about pushing students outside of their comfort zone. Every day that I worked with the [sport] team I was doing treatments, assisting with rehab, doing evaluations, or being quizzed on past materials. [My preceptor] also does a good job about working on checkoffs, or talking about related athletic training things during practice. Every day is a day well spent when I went to this clinical rotation.

Several other ATSS stated that their preceptor stimulated their critical thinking skills while having the students think through simulations. Take James' comments regarding his experiences,

I really enjoyed the (real-life) situations that [my preceptor] would come up with. [My preceptor] would fake an injury

and I would be responsible for doing a very quick evaluation and then getting the athlete off in the quickest time possible to not hold up the game any more than necessary.

William enjoyed similar situations as his preceptor used simulations to help improve his skills:

[My preceptor] would give me and other ATs an injury or medical scenario and we would have to figure out what is going on with the athlete. I enjoyed doing the scenarios because I love practicing my evaluation techniques because that is how I can improve. [My preceptor] would also go over manual muscle tests and palpation techniques with me and the other ATs with my rotation.

Another student enjoyed learning from her preceptor because the teaching style of her preceptor matched her learning style. The questionnaire draws information regarding critical thinking stimulation and integration of knowledge by asking the ATS to describe a “teachable moment.” When asked to explain a teachable moment, Margaret said,

A teachable moment that the preceptor used was when [the preceptor] talked about an injury or a situation. [The preceptor] would use another student as the example. So sometimes [the preceptor] would move the student's body part through the motions to allow the student to feel what was actually happening. This helped me because I am more of a kinesthetic learner so feeling what [the preceptor] was talking about really helped me understand.

DISCUSSION

Findings

Our findings suggest that good learning experiences are occurring in the clinical education rotations of our participants. The ATs perceive that their preceptors are good role models, mentors, and educators and skillful athletic trainers. Curtis et al⁴ studied ATS perceptions of clinical supervisor behaviors using a critical incident study in 1998. In analyzing supervisor behaviors that were helpful to students in the clinical education setting, they found mentoring was the most-reported positive behavior. In the context of their findings, mentoring related to frequent explanation, demonstration, and constructive feedback.⁴ Mentoring was followed by acceptance, nurturing, and modeling behaviors. The behaviors that hindered the clinical experience in this study were incidents of humiliation and lack of availability.⁴ Our results support the findings of Curtis et al⁴ in that 2 of the 3 themes involved positive role models and appropriate supervision (the opposite of lack of availability). Our participants added the theme of being mentally stimulated through critical thinking. Direct supervision to stimulate critical thinking, rather than independent experiences without guidance, is important because direct supervision is now the normative behavior required by CAATE.¹ We are more concerned with quality time with the preceptor rather than “putting in hours.” The findings of the current study, where students remained engaged in providing health care to patients, promotes this ideology of active and involved learning.

Weidner³⁰ and Weidner and Henning⁶ have developed several standards by which clinical supervisors should be evaluated. The 7 accepted standards include the following: legal and ethical behavior, communication skills, interpersonal rela-

tionships, instructional skills, supervisory and administrative skills, evaluation of performance, and clinical skills and knowledge.⁶ These values are used to foster and augment quality clinical education and could be helpful in forming and shaping an impression not only about a particular preceptor, but also about the requirements of clinical education in general. In several studies on this topic, mentoring has been shown to be an important component of the relationship between students and preceptors.³⁻⁷ Program directors and clinical instructor educators should be guided by these standards to select, train, and evaluate their preceptors in order to help ensure that optimal clinical education is taking place.⁶ As a result, the clinical component of athletic training education can be more carefully designed to prepare students for their future. We use these standards in our evaluation process, and although it is vital to evaluate legal and ethical behavior of our supervisors, this is not what stands out to students when assessing their preceptors. Perhaps this is because no legal or ethical behavioral incidents occurred while our participants were engaged with their preceptors. We believe that if such an occurrence had happened, our participants would have discussed it in their responses to the questionnaire. We did find that of these 7 standards, interpersonal relationships, communication skills, instructional skills, and supervisory skills were what students felt were the most important attributes of their clinical instructors. Thus, although we agree that the 7 accepted and important aspects for quality preceptors⁶ should be assessed, we promote the characteristics that keep our students engaged while attending their clinical education sites. When our participants designate clinical education to be the “best part” of their curriculum, we take notice of this enthusiasm for the experiential portion of the ATP.

Stimulating critical thinking skills has also been shown to provide the basis for problem solving and clinical reasoning.²⁹ Our participants appreciated scenarios and role playing to stimulate the bridging of didactic instruction to the clinical application in real-life situations. Because students spend the majority of clinical education experiences unengaged,³¹ we believe that preceptors can best create simulations during downtime in the athletic training clinic or during practice time. This leads to real evaluations in both settings where students feel the autonomy necessary to be challenged and gain the sense of success necessary to persist and progress in the field.⁵ Explanation, demonstration, and constructive feedback and nurturing have been shown to enhance the type of mentoring that fosters meaningful relationships between ATs and their preceptors.⁴ The teachable moments described by the participants in this study also reinforce enhanced learning and fostering of intellectual curiosity in the clinical education setting.³² According to Rich,³² engaged clinical experiences help define a teachable moment, where professional discourse about skills and appropriate professional activities, actual hands-on experience, and skill development, practice, role playing, and simulations occur. Our results show that students enjoy hands-on experiences, and also learn from initiating evaluations from real injuries or from scenarios presented by their preceptors. We believe the strong teachable moments used by their preceptors are one reason these students enjoy clinical education.

Our theme of *supervised autonomy*¹⁰ was well described by our participants. It is important to note that at the time of data

collection, this program used a travel policy that defined the role of the first responder and allowed seniors to travel alone with their assigned team as a first responder and under the supervision of the host athletic trainer. Since these interviews, the Strategic Alliance of CAATE, the Board of Certification, the NATA, and the NATA Foundation has released the “Joint Statement on Student Supervision”¹³ that required accredited programs to discontinue this type of autonomous travel, and we therefore believe this theme may change in the future. In the past, when the program studied used the internship route to certification, students traveled alone with the teams they served. The students have always enjoyed autonomy, but this has drastically decreased in the past 10 years with the progression of educational standards and accreditation changes. We promote the idea of *supervised* autonomy¹⁰ that gives students autonomy without placing them in inappropriate environments of failure, injury to patients, or compromising accreditation standards.

Limitations

It is important to note some limitations to the current study. As is common with qualitative research, it is difficult to generalize our results to a broad range of ATPs, as our participants came from only 1 ATP. Studying ATSS from other ATPs, especially those with different clinical education requirements, may yield different results. Studying clinical education experiences of ATSS at different points of their educational career may also provide different results. Future research should examine the experiences of underclass students to determine how to provide appropriate clinical learning experiences. Also, our participants’ final clinical education experiences took place at secondary schools and colleges. Perhaps students engaged in other settings may have different responses. Further, our study had a poor gender balance, which may have altered our results. Knowing that the clinical education coordinator, a full-time faculty member of this program, would be reading the evaluations may have resulted in more positive comments and fewer negative comments from ATSS. Finally, athletic training educators of the ATP we studied have been informally evaluating students’ clinical education experiences and preceptor performances since the program began the accreditation process in 2003. Students have consistently provided positive preceptor and site evaluations, and this may have created a culture of positive responses to the clinical education portion of the program and thus biased the participants toward positive reflections.

CONCLUSIONS

We have found through qualitative analysis of our preceptor evaluation questionnaire that senior participants have enjoyed and found meaningful experiences in clinical education. Three major themes emerged when we completed our analysis that reinforced previous and anecdotal evidence regarding positive attributes of preceptors. To help provide a positive learning environment for senior athletic training students, athletic training faculty administrators should select preceptors who can successfully model professional responsibilities, present ATSS with authentic learning experiences, and promote higher-level thinking. Positive role models, who allow students appropriate autonomy while teaching them skills, engaged these students in critical

thinking practices as well as clinical skills practice. We believe providing ATSS with exposure to preceptors who can meet these criteria may alter persistence decisions in the athletic training profession and should be a goal of clinical experiences for all ATSS.

REFERENCES

- Standards for the Accreditation of Entry-Level Athletic Training Programs. Commission on Accreditation of Athletic Training Education Web site. <http://www.caate.net/wp-content/uploads/2014/07/2012-Professional-Standards.pdf>. Accessed 2012.
- Klossner J. The role of legitimation in the professional socialization of second-year undergraduate athletic training students. *J Athl Train*. 2008;43(4):379–385.
- Pitney WA, Ehlers GG. A grounded theory study of the mentoring process involved with undergraduate athletic training students. *J Athl Train*. 2004;39(4):344–351.
- 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.
- Bowman TG, Dodge TM. Factors of persistence among graduates of athletic training education programs. *J Athl Train*. 2011;46(6):665–671.
- Weidner TG, Henning JM. Development of standards and criteria for the selection, training, and evaluation of athletic training approved clinical instructors. *J Athl Train*. 2004;39(4):335–343.
- Weidner TG, Laurent T. Selection and evaluation guidelines for clinical education settings in athletic training. *J Athl Train*. 2001;36(1):62–67.
- Weidner TG, Henning JM. Importance and applicability of approved clinical instructor standards and criteria to certified athletic trainers in different clinical education settings. *J Athl Train*. 2005;40(4):326–332.
- Laurent T. Clinical instructors’ and student athletic trainers’ perceptions of helpful clinical instructor characteristics. *J Athl Train*. 2001;36(1):58–61.
- Sexton P, Levy LS, Willeford KS, et al. Supervised autonomy. *Athl Train Educ J*. 2009;4(1):14–18.
- Mazerolle S, Benes S. Factors influencing senior athletic training students’ preparedness to enter the workforce. *Athl Train Educ J*. 2014;9(1):5–11.
- Mazerolle S, Dodge TM. Role of clinical education experiences on athletic training students’ development of professional commitment. *Athl Train Educ J*. 2015;10(2):138–145.
- Strategic Alliance. *Joint statement on student supervision*. Commission on Accreditation of Athletic Training Education Web site. <http://www.caate.net/wp-content/uploads/2014/06/Joint-Supervision-eblast1.pdf>. Published December 16, 2011. Accessed December 22, 2011.
- Weidner TG, Noble GL, Pipkin JB. Athletic training students in the college/university setting and the scope of clinical education. *J Athl Train*. 2006;41(4):422–426.
- Levy LS, Gardner G, Barnum MG, et al. Situational supervision for athletic training clinical education. *Athl Train Educ J*. 2009;4(1):19–22.
- Racchini J. Enhancing student retention. *Athl Ther Today*. 2005;10:48–50.
- Mazerolle S, Gavin K, Pitney WA, Casa D, Burton L. Examining influences on undergraduate athletic training stu-

- dents' career decisions post-graduation. *J Athl Train.* 2012;47(6): 679–693.
18. Fraenkel JR, Wallen NE. *How to Design and Evaluate Research in Education.* 3rd ed. New York, NY: McGraw-Hill; 1996.
19. Pitney WA, Parker J. Qualitative inquiry in athletic training: principles, possibilities, and promises. *J Athl Train.* 2001;36(2): 185–189.
20. Yin RK. *Case Study Research: Design and Methods.* 3rd ed. Thousand Oaks, CA: Sage; 2003.
21. Salant P, Dillman D. *How to Conduct Your Own Survey.* New York, NY: John Wiley & Sons Inc; 1994.
22. Creswell J. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research.* 2nd ed. Columbus, OH: Merrill Prentice Hall; 2005.
23. Turocy P. Survey research in athletic training: the scientific method of development and implementation. *J Athl Train.* 2002; 37(4 suppl):S-174–S-179.
24. Meho L. E-mail interview in qualitative research: a methodological discussion. *J Am Soc Inf Sci Technol.* 2006;57(10):1284–1295.
25. Berkeley J. 25 most popular American male names, 25 most popular American female names. Lifesmith Classic Fractals Web site. <http://www.lifesmith.com/comnames.html>. Accessed June 14, 2011.
26. Pitney WA, Parker J. Qualitative research applications in athletic training. *J Athl Train.* 2002;37(4 suppl):S-168–S-173.
27. Strauss AL, Corbin JM. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques.* Newbury Park, CA: Sage Publications Inc; 1990.
28. Strauss AL, Corbin JM. Grounded theory methodology. In: Denzin N, Lincoln Y, eds. *Handbook of Qualitative Research.* Thousand Oaks, CA: Sage Publications Inc; 1994:273–285.
29. Barnum MG. Questioning skills demonstrated by approved clinical instructors during clinical field experiences. *J Athl Train.* 2008;43(3):284–292.
30. Weidner TG. *The Athletic Trainer's Pocket Guide to Clinical Teaching.* Thorofare, NJ: SLACK Incorporated; 2009.
31. Berry D, Miller M, Berry L. Effects of clinical field-experience setting on athletic training students' perceived percentage of time spent on active learning. *J Athl Train.* 2004;39(2):176–184.
32. Rich VJ. Clinical instructors' and athletic training students' perceptions of teachable moments in an athletic training clinical education setting. *J Athl Train.* 2009;44(3):294–303.