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ORIGINAL RESEARCH

Athletic Training Students' Perceptions of the Immersive Clinical Experience and its Influence on their Development

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Context: Immersive clinical experiences are critical clinical education components in athletic training. Program directors have indicated potential isolation from peers and faculty, a financial burden, and less engagement in quality learning during immersive clinical experiences.

Objective: To explore athletic training students' perceptions of the immersive clinical experience as it pertains to their development.

Design: Qualitative study.

Setting: Individual virtual interviews.

Patients or Other Participants: A total of 15 athletic training students who participated in the immersive clinical experience in the last 9 months took part in our study (males = 4, females = 11; age = 25 ± 5 years, range = 21–36 years).

Data Collection and Analysis: We conducted interviews and recorded and transcribed them verbatim. We developed a codebook using the consensual qualitative research tradition to identify domains and categories. Trustworthiness was established using member-checking, multiple researchers, and an auditor.

Results: Athletic training student perceptions of the immersive clinical experience revealed 2 domains: exposure and improved preparation for clinical practice. From increased exposure, participants gained additional experience with administrative duties, communication and relationships, interprofessional and collaborative practice, an increased quantity and quality of patient encounters, and preceptor influence on learning opportunities. From improved preparation, participants experienced socialization in which they were more integrated in facility activities, gained a greater appreciation for the value of the profession, had greater autonomy and inclusion, and perceived more value in the immersive clinical experience than in nonimmersive experiences.

Conclusions: Athletic training students who participate in immersive clinical experiences feel that they have increased exposure to athletic training practice and improved preparation for transition to practice.

Key Words: Clinical education, transition to practice, preceptorship

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KEY POINTS

- During the immersive clinical experience, athletic training students perceive a positive impact on clinical education, potentially decreasing the strain during transition to practice.
- Athletic training programs should choose and train preceptors for improved experiences within the immersive clinical experience.
- Improved autonomy through the immersive clinical experience can increase the quantity and quality of patient encounters.

INTRODUCTION

Immersive clinical experiences have become increasingly used in professional-level athletic training programs to drive change.[1] The impact of these experiences on athletic training students has not been explored, but it is important to know and understand the perceived impact immersive clinical experiences have on athletic training students and their development in order to continue to develop and improve these experiences.[1] This information will provide athletic training programs with the means to improve the immersive clinical experiences for athletic training students.

Through the social learning theory, athletic training students who participate in extensive clinical education would be able to more efficiently and effectively gather information to understand how the athletic training profession functions.[2] The small details of clinical practice may be missed for those who are completely exposed to the culture within an athletic training facility, with both its positive and negative patient outcomes. Research[2] suggests that this lack of integration results in diminished preparation when transitioning to autonomous practice and may leave athletic trainers with a sense of partial participation in the clinic in which they work. In addition, newly certified athletic trainers are thought to have decreased confidence and ability to communicate interprofessionally.[3] As a result of social learning theory,[2] it can be expected that the more frequently athletic training students participate in clinical education, the more experience they will have in each of these categories.

Many institutions currently use the clinical integration model in athletic training clinical education; this model provides a combination of clinical experiences and didactic education simultaneously.[4] Within this model, athletic training students undergo classroom education during a portion of the day, followed or preceded by clinical experience in the athletic training facility. Through the clinical integration model, athletic training students may experience some traditional clinical work yet not see the entire breadth of clinical practice. This poses the risk that athletic training students may miss out on various aspects of the profession and potential experiences, such as administrative work, interprofessional collaboration, and staff meetings, such as those that occur with the coaches or athletic director, affecting their preparedness for transition to practice.[5,6] The *Professional Education in Athletic Training: An Examination of the Professional Level Degree*[7] discusses 11 key findings establishing the need to increase the impact of clinical education on athletic training students. Key finding No. 8 finds that "professional education should not compete with general education, liberal arts, and foundational science requirements. . ." [(p3)]; therefore, it is reasonable to assert that athletic training students lose valuable didactic education and clinical experience within the current model.[7] This indicates the need for change in clinical education, specifically the addition of immersive clinical experiences.

An immersive clinical experience can be described as a clinical rotation in which the athletic training student attends clinical experiences on a full-time basis with only online education that does not distract from the clinical experience.[8] The changes to accreditation for athletic training programs will require a minimum of one 4-week-long immersive clinical experience.[1] As a result, the athletic training student experiences the nuanced integration between athletic training preceptors, physicians, other health care providers, the patient, and the complexities of true clinical practice.[4] A 4-week exposure to the immersive clinical experience potentially increases the number of opportunities for students to engage in higher-level, hands-on experience, under the supervision of a credentialed athletic trainer. Athletic training students may then receive extensive feedback on performance as a member of the integrated modern health care team.

Current research[2,9,10] details the immersive clinical experience in other medical fields, such as nursing, occupational therapy, and physical therapy. This study[2] indicate that there is improvement in those students who take part in an immersive clinical experience. The goal of this study is to gather information from current professional-level athletic training students regarding their overall perception and experiences with the immersive clinical experience and the potential effects on their development.

METHODS

Design

We completed this investigation via the consensual qualitative research (CQR) approach, which has been previously used in athletic training research.[11–13] Before the initiation of the investigation, we obtained approval from the Institutional Review Board at Indiana State University.

Participants

This study included 15 participants (males = 4, females = 11; age = 25 ± 5 years, range = 21–36 years). Inclusion criteria included athletic training students who participated in an

Table 1. Participant Characteristics

Pseudonym	Age, y	Sex	Term Number (Out of 6) in the Immersive Clinical Experience	Immersive Clinical Experience Setting
Emily	31	Female	3	College, clinic
Alyssa	22	Female	3	Secondary school, clinic
Erica	23	Female	1	Secondary school
Landon	25	Male	4	Secondary school, clinic, college
Alison	27	Female	5	College
Amanda	23	Female	5	Secondary school, clinic, college
Evan	23	Male	3	College, military
Andrea	23	Female	1	College
Natalie	23	Female	6	Secondary school, clinic, college
Chelsea	23	Female	1	Secondary school
John	24	Male	1	College
Kelsey	22	Female	3	Secondary school, college, performing arts
Maddie	36	Female	3	Youth sports, college
Megan	21	Female	1	College
Jamie	32	Male	1	Secondary school, college, professional

immersive clinical experience for a minimum of 4 weeks within a Commission on Accreditation of Athletic Training (CAATE)–accredited professional-level athletic training program within 9 months of the interview (Table 1). We selected athletic training students because their perceptions are often used for feedback and quality improvement within athletic training programs.[1] We recruited participants through social media blasts on Twitter, Facebook, and LinkedIn. Each blast detailed who was being recruited along with a link to an Internet-based demographic survey (Qualtrics®, Inc, Provo, UT), which contained the informed consent. The primary investigator (PI) (A.M.G.) also recruited via email from the National Athletic Trainers' Association (NATA) survey distribution list of athletic training student members. The email provided each potential participant with the same demographic survey and informed consent via the Qualtrics link. Once individuals completed the survey and provided informed consent, the PI sent an email to set up a date and time for the 30-minute interview, as described below. Data collection was continued until data saturation occurred, as described within the CQR methodology.[11,12] Each participant was provided with a participant number, and all transcripts were deidentified.

Instrumentation

Participants completed a 6-question demographic survey before completing the interview. The demographic survey collected the following information: name, age, number of terms in the athletic training program, terms during which the student had participated in immersive clinical experiences, average number of hours in the immersive clinical experiences per day, and the settings in which the immersive clinical experience occurred. A term was defined as a quarter, semester, or trimester, as it occurred based on the university attended. Questions asked during the semistructured interviews focused on the education of the athletic training student and the experiences they had during the immersive clinical experience specifically (Table 2). We created the interview questions based on the current knowledge of athletic training clinical education and the 2020 CAATE Accreditation Standards.[1,10,14,15] Two co-investigators (Table 3) in the same field provided a content analysis on the interview protocol, and no modifications were needed before administering the interviews.

Data Collection Procedures

Once the demographic survey was completed, the PI scheduled each participant for an individual, audio-only virtual interview (Zoom, San Jose, CA), which lasted for an average of 23 minutes. Throughout the interview, the PI encouraged an open conversation, avoiding influencing the participant to respond in a certain way. At the conclusion of the interview, the audio file was automatically saved to a cloud within the Zoom software and subsequently transcribed. The PI deidentified all transcriptions by removing names, school names, and surrounding cities.

Data Analysis and Trustworthiness

To ensure trustworthiness of the data through the use of CQR we used member-checking, multiple researchers, and an auditor. Member-checking occurred by providing each participant with his transcript to ensure the information provided to the PI during the interview was accurately recorded.[12] Once member-checking was complete for at least one-third of the participants, the data analysis began. The research team consisted of the PI and 2 others in the athletic training profession with experience in CQR as well as 1 external auditor. CQR ensures trustworthiness through the use of multiple perspectives to decrease the impact of researcher bias. For the first phase of the coding process, members individually read and analyzed the same 5 of the deidentified transcripts and then met to develop an initial consensus codebook consisting of domains and categories.[11,12] For the second phase of coding, each member coded 4 transcripts individually, 2 from the first phase and 2 different ones, in order to confirm and make edits to the codebook as necessary, and then the members met to discuss the codebook. In the third phase of the coding process, each member coded 5 different transcripts individually, completing the coding process for all 15 transcripts. Once all 15 transcripts were coded at least once, each was checked by one of the other 2

Table 2. Interview Questionnaire

Questions
1. Are you able to suggest or provide input regarding your placement(s) at immersive clinical experiences? a. If not, do you know why not? b. If so, please describe how you provide input.
2. Please describe your nonimmersive clinical education experiences in regards to day-to-day duties, patient encounters, and types of experiences?
3. Please describe your immersive clinical experience in regards to day-to-day duties, patient encounters, and types of experiences.
4. When, within the course of your athletic training program, do you believe your first immersive clinical experience should occur? Please explain. a. How often do you believe athletic training students should take part in immersive clinical experiences?
5. How was your immersive clinical experience the same or different than your nonimmersive clinical experience? a. If time is not addressed, ask follow-up.
6. In what ways, if any, did your relationship with your preceptor impact your immersive clinical experience?
7. In what ways, if any, do you think the immersive clinical experience impacted your understanding of your role as an AT?
8. In what ways, if any, do you think the immersive clinical experience impacted your ability to develop professional goals and objectives?
9. In what ways, if any, do you think the immersive clinical experience impacted your clinical skills or ability to practice as a clinician?
10. How would you describe your preparedness to transition to be certified athletic trainer on a job setting? a. Do you think the immersive clinical experience has shaped your development as a clinician? b. If no, please explain why not c. If yes, please explain
11. What, if anything, about the immersive experience that helps them more than traditional?
12. Is there anything else you would like to share with us regarding your immersive clinical experiences?

members by recoding each transcript. Once the team completed the coding process, frequency counts were used to determine the incidence of each domain and category across the entire data sample. Once coding and cross-analysis were completed, the confirmed transcripts and consensus codebook were sent to the external auditor (Z.J.D.) for review. No changes were made during this review.

RESULTS

Two major domains emerged during the data analysis process regarding student perceptions of the immersive clinical experience in athletic training: (1) exposure and (2) improved preparation. The categories that supported each domain and that further described the perceptions of the athletic training students are presented in the Figure. Table 4 reports the frequency of each domain and category.

Exposure

Exposure refers to the participants discussing the increase in both quantity and quality of experiences during their immersive clinical experience. Categories that emerged through this domain are (1) administration, (2) communication and relationships, (3) interprofessional and collaborative practice, (4) patient encounters, and (5) preceptor influence.

Administration. Eleven of the 15 participants reported an increased exposure to administrative duties. This included tasks such as documentation, preparticipation physical exams, and administrative meetings. Andrea stated the following:

> *You get to see all of the administrative work and behind-the-scenes with coaches and the [athletic director] (AD), which is what I think is the best thing. So far, all the preceptors I've had said that if there's one thing that they wish that they would do in school, or learned more when they had their rotations, was going through all of the administrative work or all the insurance work. That's something that you don't really go over as much when you're in school.*

In addition to the exposure to the administrative duties, Chelsea reported an increase in the quantity of documentation, providing the opportunity for additional practice in comparison to nonimmersive clinical experiences:

> *I was also able to improve my documentation skills, just because I was working with athletes more closely and I needed to write the notes for them. I haven't been able to do that in past rotations.*

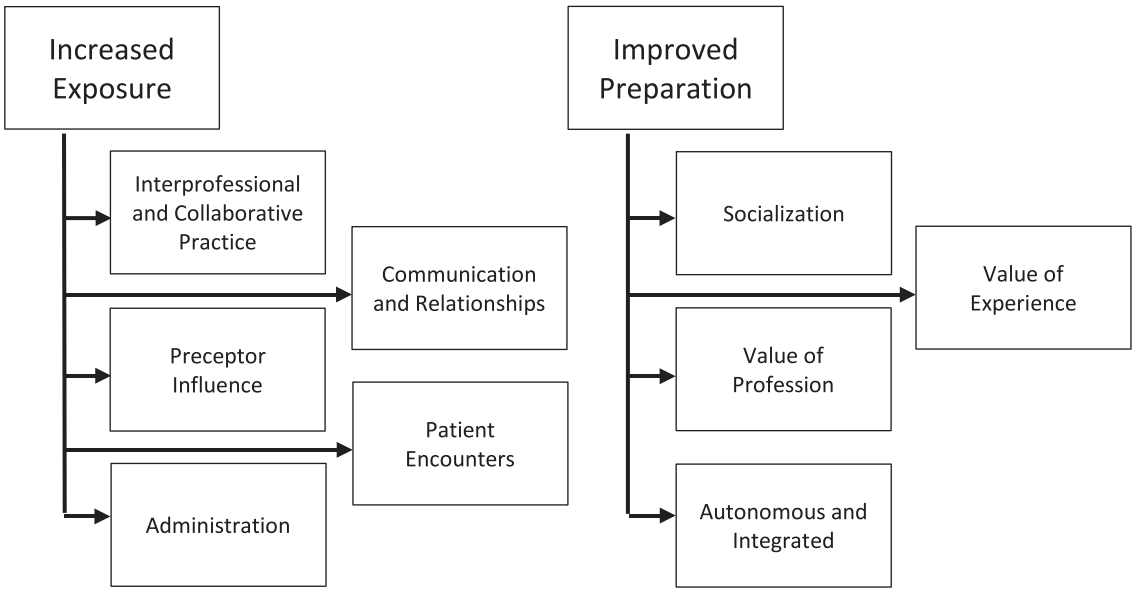
Communication and Relationships. Thirteen of the 15 participants reported an increase in communication and quality of relationships with others, such as administrators, coaches, parents/guardians, and patients. Alyssa reflected on their time in their immersive clinical experience:

> *A lot of it was being able to communicate with the athletes. At first, I definitely struggled with … having to put things into layman's terms for athletes …. I have definitely grown more confident with being able to explain things to my athletes and in a way that I also gain their trust during the process. They*

Table 3. The Roles and Experience of the Research Team

Researcher	A.M.G.	E.R.N.	Z.J.D.	S.E.W.	L.E.E.
Role	Principal investigator; data analysis team member	Data analysis team member	Auditor	Co-investigator	Senior investigator; data analysis team member
Research experience	Novice qualitative researcher	Experienced qualitative research	Competent qualitative researcher	Expert qualitative researcher	Expert qualitative researcher

Figure. Domains and categories.



have no problems now coming to me asking for me to check out a different injury or treat them.

When speaking of their nonimmersive clinical experiences, Natalie stated:

It's different, I don't feel like I'm making the same connections with people because I'm not seeing people on a day-to-day. I see people every day during my immersive clinical and I make connections with the students. They trust me, versus doing something in a setting where I might not be there with them every single day.

In addition, Kelsey saw a similar trend in the amount of trust associated with these relationships, resulting in an increase in the trainers' confidence:

By working with the athletes through different things, they trust me, and they will let me know if something doesn't feel right or what I'm saying isn't what they're feeling. It was through those relationships and through that repetition I slowly learned that there is but so much I can do to actually like harm these individuals and everything that I'm doing is truly for their betterment. So, I've learned that I'm better off just trusting my gut and going with it.

Table 4. Frequency Counts of Categories[a]

Domain and Category	Overall	
	Frequency	Count
Exposure		
Administration	Typical	11/15
Communication and relationships	Typical	13/15
Interprofessional and collaborative practice	Variant	6/15
Patient encounters	General	15/15
Preceptor influence	General	15/15
Improved preparation		
Socialization	Typical	14/15
Value of the profession	Typical	9/15
Autonomy and integration	Typical	9/15
Value of the experience	General	15/15

[a] Legend: General = 15 participants; Typical = 8 to 14 participants; Variant = 4 to 7 participants; Rare = 3 or fewer participants.

Interprofessional and Collaborative Practice. Six of the 15 participants reported in increase in the amount of interprofessional and collaborative practice they were able to experience. This included interaction with physicians or other health care professionals regarding the patient's care and progression. Most participants reported an increase in communication with these individuals. Natalie notes they are able to learn by seeing other "professionals do their own thing" to develop their personal philosophy. Amanda noted that the amount of time they spent in the immersive clinical experience affected what they were able to take part in:

I get to sit in when the team doctors come, which I don't think you're going to be able to see if you're in a nonimmersive experience because you're in class normally the time they come. I think that's cool, because I've definitely seen some interesting cases just because the doctor's there and athletes tend to open up more to doctors. I think that's a good experience to have.

Emily talked about being able to see the coordination of care between the athletic trainers and other health care professionals:

I've also had the opportunity to work with some of our orthopaedic doctors and work with physical therapists and coordinate patient care with them. Well, not me personally, but I was able to sit in the meetings and see how that works. That was what's been really amazing to see there because it's us working together as a health care team.

Patient Encounters. All participants reported an increase in quantity and quality of patient encounters when compared to that associated with their nonimmersive clinical experiences. Patient encounters include all interactions and communications with patients. Participants stated that during the immersive clinical experience there is no interruption of their

clinical experience during the day, providing them the opportunity to see more patients and be less distracted during those patient encounters. Evan reflected:

> *You get way more reps doing evaluations, doing rehab with patients, doing wound care, and a lot more of the acute trauma than in my nonimmersive [clinical experience]. I really had little to no experience with acute injuries and acute evaluations, and that has been much more available in [the immersive clinical experience].*

Evan also compared the 2 experiences, showing the increase in patient encounters and extended learning time:

> *While we're taking courses, we move at a much faster pace. We might only get a week or 2 days on knee evaluation techniques. But in the clinic and full-time immersive [clinical experiences] I could end up evaluating maybe 3 or 4 or 5 patients a day.*

The immersive clinical experience also provided participants to increase the quality of the time with the patient, to keep from those additional distractions that may occur during the nonimmersive clinical experiences. Jamie stated: "I use my time wisely as much as I possibly can, so it helps me focus more on the patient versus thinking of the million different things that I would during a nonimmersive [clinical experience]."

Preceptor Influence. All participants reported that preceptors had an influence on the immersive clinical experience. Influence could include any positive or negative experience associated with the preceptor. This included aspects of mentorship or allowing them to complete more patient care. Evan reflected on the experience:

> *Both of them were very encouraging and helping me, motivating me, encouraging me, and telling me that I have the ability to do things. They were both reassuring …. Both of them gave me opportunities and sought out opportunities for me to practice my skills …. [They] are very open to putting me in positions where I might fail so that I can so that it can become a learning opportunity …. I think that athletic training students need to make mistakes so that they can learn from them.*

In addition to mentorship, preceptors were able to provide the participants with learning opportunities within the clinic. Andrea reflected on their relationships:

> *I've been very lucky with all the preceptors I've had. They've all been great at working with me and working with any questions I have. If they work on a patient and I'm observing them, they were all very good at talking me through what they were doing, why they were doing it, and how it was benefiting the patient. Which also makes it better for the athlete, because I've realized they're also learning a lot …. If I do have any questions, I was never nervous about asking them. If there was a new technique that I wanted to learn, when there was like downtime … all of them have been really good at pulling me aside and asking me if I had any questions or if I wanted to go over anything.*

Although most noted a positive relationship, some stated that the negative relationship with their preceptor also influenced their experience. Erica stated:

> *It got to a point where they were kind of running out of things for us to do, but we would still have to be there because it was our [immersive clinical experience], so that was a little bit frustrating. I think that extra sitting around time during the [immersive clinical experience] wasn't necessarily contributing to our education.*

Improved Preparation

Improved preparation details the experiences that further develop skills, athletic training understanding, and the athletic trainer's ability to transition to practice. Categories that emerged through this domain are (1) socialization, (2) value of the profession, (3) autonomy and integration, and (4) value of the experience.

Socialization. Fourteen of the 15 participants reported a sense of socialization to the athletic training facility and profession. This included situations such as a feeling of being part of the athletic training staff, completing daily athletic training tasks, and completing a full day as if they had transitioned to practice. Most participants reported that they were able to see how being an athletic trainer functions and what other tasks are required as an athletic trainer. Maddie reflected:

> *It was more of what an athletic trainer does when they're not busy. We learned what they were, what they did. I really liked seeing the life of an athletic trainer.*

Andrea also reported an increase in the understanding of her role as an athletic trainer and her ability to understand work-life balance:

> *I think it actually gives the best idea of what it's like to be an athletic trainer, because we have to be there whenever they're there. We actually do get the full experience. In this setting, this is what it would be like if you were an athletic trainer. From responsibilities like the laundry, you're there from morning to night. You get the full experience on what it's like to figure out how to balance your day and then go home and figure out how to balance that. You experience what their actual duties are, rather than only being there 3, 4 hours a day and just seeing the athletes.*

Value of the Profession. Nine of the 15 participants reported an increase in their sense of the value of the athletic training profession. Most reported an increase in appreciation for what an athletic trainer can do, leadership in athletic training, and engagement in clinical practice and the profession at various levels. Natalie delved into advocacy in athletic training and how the immersive clinical experience expanded on this idea:

> *I'm a big advocate for what athletic trainers are and what they should be doing. I just had this conversation with my preceptor the other day. I'm not a big fan of when coaches are telling athletic trainers what to do or how things should be run, things like that. So I think I've made my own idea of how I want to handle coaches or other people who don't know what an athletic trainer is.*

Megan expanded on this idea that they are able to see how the profession functions and to gain appreciation for athletic trainers: "The [immersive clinical experience] really showed me how much athletic trainers work in the real world and how

long their days are, and that it's really important to just take care of yourself and set boundaries."

In addition, some participants reported being able to use the immersive clinical experience to find and explore their weaknesses in their clinical practice. Chelsea stated:

I think the time spent in my immersive [clinical experience] showed me exactly where my weak spots are, so now I know exactly what I need to be working on, working towards the BOC [Board of Certification exam] and working towards being a young professional. It's pretty easy in most rotations to figure out what your strengths are, just because they come out a lot more in preceptor evaluations. But for myself, I understand my weaknesses a lot more now.

Autonomy and Integration. Nine of the 15 participants reported an increase in autonomy in clinical practice and a more integrated feeling within the athletic training facility and staff. Many reported a feeling of inclusion, trust, and independence. Kelsey noted:

I feel very trusted and feel very welcomed into this situation and very needed. So, I'm able to sort of work on my own and I feel that my preceptor would tell me if they don't trust me to do something or if I'm doing something wrong. So, I'm able to basically work autonomously with them just watching over me, which helps me build my confidence, which I feel is making me into a better athletic trainer overall.

John added:

I'm doing everything that my preceptor as a certified athletic trainer does. She just let me run the show …. She's just in the background and just watching me as I'm doing everything. I'm basically taking her role while she was just sitting down and watching me or correcting me if there's something that I did wrong or there's something to improve on or do something that I'm improving on.

In addition to personal growth, some participants reported that they felt as if they were a functioning portion of the athletic training facility. This included feelings of being part of the athletic training staff or practicing as an athletic trainer. When asked about their immersive clinical experience, Alison reflected:

It was just a huge shock for me. It was a lot to adjust to, but at the same time after I kind of got into a flow, I really felt like I was an athletic trainer, like I felt like I was part of the staff and I felt like I was trusted.

Value of the Experience. All participants noted some feeling of value in the immersive clinical experience. This included being able to choose their own clinical assignments, wanting to increase the amount of immersive clinical experiences, and generally enjoying or recognizing the worth of the experience. Landon notes that they feel "very prepared" after their time in the immersive clinical experience. Kelsey talked about how the experience has impacted her growth as an athletic trainer:

I feel that without it, I wouldn't be half the athletic trainer that I am today. Just the full dedication to being able to be in clinic and not having to worry about this big test to study for or I have to go home and do all this extra stuff. I could just fully be there and not be worrying about outside things occurring. I was 100% there for all 8–10 hours and I'd be there every single day.

In addition to having the experience itself, some noted the timing of the immersive clinical experience within the course of their athletic training education program. Most stated that placing this portion of the training later in the program is more beneficial, in order to allow the athletic training students to gain base knowledge. Alison described this idea when asked about when she believed the immersive clinical experience should take place:

During the first couple weeks of this second year, I felt very unprepared. It was a huge drop from my first year into being a second year, so kind of being almost babied my first year, a lot of the preceptors that we had were like, 'oh yeah, you can't do this.' So, just watch, then in the second year you're literally thrown into everything. So, it's really hard for me to say, 'oh yeah, that should start within the first year.' In the first year, you really don't know anything and you can't do a whole lot. So, I think education is really important to kind of get to know what to do before going into that immersive setting.

DISCUSSION

Immersive clinical experiences can be a significantly effective way for athletic training students to learn and grow through their clinical education.[9,10,16] Within this study, athletic training students generally reported a positive immersive clinical experience due to exposure to additional opportunities they were not able to gain during their nonimmersive clinical experiences. The immersive clinical experience provides more hands-on clinical education, one of the most effective ways of learning, according to millennial students.[17] It is expected that this increase in exposure from the immersive clinical experience will lead to improved preparation for transition to clinical practice as a result of the increased frequency and breadth of skills that are practiced throughout the students' clinical education. Athletic training students are able to then see their future in the profession, create their own clinical philosophy, and become better clinicians overall.

Exposure

Within the domain of exposure, we found an increase in quality and quantity in communication and relationships, administration, preceptor influence, patient encounters, and interprofessional and collaborative practice. Relationships with others, whether that be patients, coaches, administrators, preceptors, or other health care professionals, are an integral aspect of athletic training practice.[18] The immersive clinical experience allowed athletic training students to interact with others at a more involved level than during their non-immersive clinical experiences. This provides the opportunity for athletic training students to develop their communication skills with the various people with whom they might interact during their time as athletic trainers. According to Carr et al,[19] communication with various personnel is necessary in athletic training practice, along with communicating specific subjects such as prognosis, diagnosis, and treatment plans. Relationships with others also increase the amount of trust between individuals, increasing the quality of patient encounters within clinical education. With the increase in the amount of time spent in the athletic training facility, there was a

perceived increase in the quality of relationships and trust with the patients. It is expected that this would in turn increase the athletic training students' ability to also trust in themselves and their abilities, which is an anticipated barrier to transition to practice.[5,6]

The quality and quantity of patient encounters were influenced by the preceptors within the immersive clinical experience, which varied from site to site. Some preceptors empowered athletic training students to complete all duties an athletic trainer would complete, while others only allowed them to observe. In past research,[20] athletic training students reported the need for diversity in their clinical experiences in order to be fully prepared for clinical practice, but this can depend on the preceptor at that specific site. This diversity can take the form of the various aspects of clinical practice and experiencing every nuance of the job. The variance in hands-on clinical education can affect the effectiveness of the immersive clinical experience, warranting specific training for the preceptors.[21–23] Each preceptor should go through a formal training by the professional athletic training program and identify an area of contemporary expertise,[23] and preceptors should be chosen and trained strategically in order to best serve the athletic training students.

For any clinical experience, preceptors have the opportunity to mentor and guide, which we found to have an impact on the experiences of athletic training students in their immersive clinical experience. This mentorship is an integral aspect for athletic trainers transitioning to practice,[5,18,24] reflecting the necessity that this mentorship begin before graduation. Mentorship and guidance are able to open up the dialogue and facilitate appropriate medical care from the athletic training student and from the preceptor.[20] Bowman et al[20] found that athletic training students who connected more with their preceptors had a perceived improvement in their clinical skills, indicating the need for mentorship in athletic training education. However, in a past study[25] preceptors reported the stresses that accompany becoming a preceptor and balancing the duties of being a clinician and a preceptor. There is a current disconnect from the needs of the athletic training students and the training, role, and expectations of preceptors, indicating the need for the formal preceptor training.

Low-quality preceptor development may lead to a lack of empowerment and a misunderstanding of what athletic training students can and cannot do. Some athletic training students had limited experiences in various activities, such as administrative work and documentation. Documentation is one of the leading forms of communication between health care providers,[26] reinforcing the need for athletic training students to understand the depths of this administrative duty. Athletic trainers have in the past indicated that they may not completely understand their administrative role,[27] which can be assumed to be linked to their lack in clinical exposure. It is expected that this is due to the increase in trust and time spent in the athletic training facility through the immersive clinical experience, allowing athletic training students to make an impact with their preceptor. The ability to build these relationships throughout athletic training practice increased the amount of exposure athletic training students had to administration, interprofessional and collaborative practice, and patient encounters.

Improved Preparation

Transition to practice can be a very stressful yet rewarding time for young professionals.[5] Preparing for a transition to clinical practice can be difficult and frustrating if there is a lack of meaningful clinical education.[5] We found that athletic training students perceived that the immersive clinical experience is able to improve the quality of preparation for this transition period by means of socialization, the value of the experience and the profession, and being autonomous and integrated in the athletic training facility. Although each athletic training student's journey is dependent on her individual experience and educational program, we assume that the immersive clinical experience is able to improve this process overall.

Through clinical practice, athletic training students should be able to get a view of what athletic training practice entails and what athletic trainers can do.[2] We found that some athletic training students felt so integrated into athletic training practice and the athletic training facility through the immersive clinical experience that they were able to feel as if they were part of the staff. This allowed the participants to appreciate the necessary work-life balance and what it takes to be an athletic trainer. Athletic training students who do not participate in an immersive clinical experience, or those who are not well integrated, may not understand fully the role they are moving into once their time as a student ends. The misunderstanding of a role can be a significantly negative aspect relative to the process of transition to practice and may result in burnout or a decrease in work-life balance.[5,6,28,29] Role ambiguity can be detrimental to an athletic trainer in the transition-to-practice phase, as it can create feelings of self-doubt, uncertainty, and shock.[5] Although hardiness and affectivity may be constructs of a mindset,[28] it can be inferred that the misunderstanding of the athletic trainer's role might shift this mindset and lead to emotional distress. Various negative feelings toward the position can lead to athletic trainers stepping down and quitting their positions.[29]

Understanding the role of an athletic trainer can also improve an athletic training student's value of the profession as a whole. In our study, we found that the immersive clinical experience was able to give the athletic training students a view of the profession and also exposed them to the things their preceptors do in addition to care, such as providing leadership and participating in continuing education. It is important for athletic trainers to understand the profession before entering the role in order to see the value in what they are able to do and so as to avoid the potential for burnout. The integration of the athletic training students into the facility and staff can be an integral aspect of showing the value of the profession of athletic training.

With integration and positive relationships come more autonomy during the immersive clinical experience. This allows athletic training students to begin to learn from their own mistakes and to take charge in their own learning experiences.[30] Athletic training students may exhibit an increase in their confidence through the process of autonomous practice with the supervision of an athletic trainer, which is a very important aspect of transitioning to clinical practice.[5,6] However, we saw that only 9 of the 15 participants exhibited this increase. Studies[30–33] of clinical education in

medicine have shown the concept of progressive autonomy or entrustable professional activities. These embrace the idea that the more practice a student has in completing the same task, the more autonomous the student can become when performing that task. This does not mean, however, that students are completely autonomous from the clinical instructor or preceptor, but rather they are supervised from afar during entrusted clinical tasks.[34] Supervised autonomy allows the student to make autonomous decisions while offering the opportunity for the preceptor to intervene if necessary.[34] The concept of supervised autonomy may be difficult for some preceptors because of the lack of trust in the athletic training student. Therefore, this indicates the need to implement entrustable professional activities in athletic training programs, such as those used for clinical education in medicine.[30–33]

LIMITATIONS AND FUTURE RESEARCH

We recognize there are limitations within our study. Each athletic training student's immersive clinical experience varied in terms of the timing, type of setting, and number of hours within the athletic training facility; thus, we are not able to provide information on specific clinical sites or types of experiences. In addition, information about the number and frequency of each type of experience was not regularly tracked during the immersive clinical experiences. Future research should explore the use of specific settings for immersive clinical experiences in athletic training education. In addition, future research should look into the timing of the immersive clinical experience within the athletic training program and investigate the impact this timing has on the value of the immersive clinical experience. We interviewed those athletic training students who had already completed the immersive clinical experience. Although our expectation was that this experience occurred within the last 9 months of the education program, the time since the experience was variable and could cause the athletic training student to have less memory of the experience. Future research should consider exploring the perceptions of the immersive clinical experience while the athletic training student is actively taking part in the experience.

CONCLUSION

The immersive clinical experience is able to provide athletic training students with an increase in the quality and quantity of clinical experiences through their professional program. In addition, athletic training students appreciate and value the immersive clinical experience when compared to a non-immersive clinical experience. As immersive clinical experiences become an accreditation requirement, programs are able to verify the benefits, as defined by athletic training students, to using this type of experience within the course of their program. Athletic training education programs should use this information to develop, maintain, and improve the immersive clinical experiences for athletic training students.

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