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ORIGINAL RESEARCH

Preceptor Perceptions of the Immersive Clinical Experience in Athletic Training Education

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Context: Clinical immersion is a newly required concept within athletic training education, and preceptors play a critical role in facilitating athletic training students' learning during those experiences.

Objective: To explore the perceptions of preceptors currently supervising athletic training students who participate in immersive clinical experiences.

Design: Qualitative study.

Setting: Individual phone interview.

Patients or Other Participants: Preceptors from various clinical sites (4 females [40%] and 6 males [60%]) with an average age of 41 ± 18 years. Participants also had an average 7 ± 8 years of experience as a preceptor.

Data Collection and Analysis: Interviews occurred via individual phone interviews using a semistructured interview script. All interviews were audio-recorded and transcribed verbatim. A 3-person research team analyzed the data and coded it into domains and categories based on a consensus process. Credibility was established with multiple researchers, an external auditor, and member checks.

Results: Three domains emerged from the data: (1) exposure, (2) benefits, and (3) insufficient training. Participants stated that as a result of exposure the athletic training students experienced increased responsibility and trust, increased realistic work environment, increased collaborative practice experiences, and skill use and refinement. Preceptors indicated that the added benefits of immersive clinical experiences led to confidence in clinical and professional interactions. Preceptors noted insufficiency in their training, specific to the expectations of an immersive clinical experience. Many preceptors sought out independent learning opportunities to enhance their role as preceptor. There was a misunderstanding as to what the main differences were between traditional and immersive clinical experiences, as well as a lack of communicated or standardized goals and objectives.

Conclusions: Participants indicated that the immersive clinical experiences were beneficial for the athletic training students' professional development. The insufficiency of training and misunderstanding of the immersive clinical experience are concerning and could be enhanced with clearly set goals and objectives.

Key Words: Clinical education, learning environment, clinical instruction

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KEY POINTS

1. Preceptors perceived that increased exposure during immersive clinical experiences is beneficial to athletic training students.
2. Preceptors suggested that immersive clinical experiences are beneficial and lead to increased confidence and improved relationships.
3. Many of the preceptors indicated insufficiency of training, specifically a lack of clearly communicated objectives and a misunderstanding of immersive clinical experiences.

INTRODUCTION

More training is needed to enhance the immersive clinical experiences offered by preceptors.

Clinical education is important for the socialization of athletic training students (ATS) and is characterized by the integration of ATS into clinical practice through the supervision of a preceptor.[1] Researchers have demonstrated that ATS place a large value on the influence of the preceptor for mentorship and role modeling.[2] Clinical experiences can serve as a catalyst for smooth transition into the workforce.[3] The Commission on Accreditation of Athletic Training Education (CAATE) has set forth a required, 4-week minimum, immersive clinical experience within new accreditation standards. The CAATE Standards reflect the expectation that ATS will be presented with more opportunity to learn through immersive clinical experiences.[3–5] Within athletic training education, the CAATE expectation is that there will be a logical progression, with responsibilities increasing over time (across at least 2 academic years), that culminates in autonomous clinical practice upon certification.[6] Previously many athletic training education programs used a clinical integration model, which dictated that students complete didactic and clinical coursework simultaneously.[1] Within a clinical immersion model, students are involved only in patient care and clinical work, meaning that didactic coursework is limited or must be designed in such a way that it does not detract from the nature of the immersive clinical experience.[1] The perception of these immersive clinical experiences on the part of athletic training preceptors has not been explored, but it is important to know and understand the perceived impact that immersive clinical experiences have on preceptors and students alike in order to continue to develop these occurrences.

The philosophy behind adding immersive clinical experiences was to enhance socialization, improve transition to practice, and increase ATS accountability under the guidance of a preceptor.[3–5] Furthermore, this model aims to educate new health care professionals to participate in the lifelong pursuit of learning, cultivate mentoring relationships, enhance ATS professional identity through prolonged clinic exposure, and improve ATS confidence to provide safe patient care.[4,7] Social learning theory presumes that modeling produces learning mainly via observation and visual information gathering, eventually making sense of what one sees in order to synthesize those behaviors over time.[4,8] Bandura proposed that social learning takes place in 4 different stages: attention, retention, reproduction, and motivation.[8,9] *Attention* is the act of seeing a specific behavior performed in order for the learner to reproduce it.[8] *Retention* is a cognitive process that the learner uses to mentally rehearse the behavior for reproduction.[8] *Reproduction* is the use of all previous information gathered in an action. Finally, *motivation* is the reinforcement of the learner by others to enact or imitate the behavior.[8] Although the intention of the clinical integration model was to ensure that learners would achieve the reproduction and motivation stages of social learning, students may not have been able to fully integrate into the model due to time and coursework detractions. Clinical experiences should allow frequent interaction with preceptors who exemplify appropriate behaviors, specifically professionalism, and set clear expectations for athletic training practice. Preceptor engagement serves to advance professional interest and time dedicated to learning activities among ATS.[2] But clinical experiences should not stop with the act of doing; they should also include metacognition and replication,[10] which are often best achieved through facilitation with an engaged preceptor. The expectation, by way of CAATE Standards, is that clinical experiences should be more meaningful and engaging, and as such an immersive clinical experience may allow students to achieve all stages of social learning as they socialize to the profession.

Although preceptorship is a vital part of ATS socialization, the clinical setting of the ATS is not as important as a supportive learning environment[10] when it pertains to the ATS progressing to graduation.[5,10,11] Clinical experiences that are realistic have been shown to increase the drive and desire to graduate because they have provided ATS the opportunity to visualize themselves in the role of an athletic trainer through their preceptors and their actions.[5] Despite the importance of clinical experiences in the development of ATS, there has been little research on the understanding of immersive clinical experiences from a preceptor perspective. It is important to identify preceptors' perceptions in the immersive clinical experience, as well as their perceptions of student professional growth. Understanding preceptors and their current and future expectations, prospective opportunities, and perceived barriers will help educators shape immersive clinical experiences. Therefore, the purpose of this investigation was to evaluate the impact of immersive clinical experiences on the professional development of ATS from the preceptor perspective.

METHODS

Design

We used a consensual qualitative research (CQR) approach to analyze the data. The CQR method uses a research team to provide a better understanding of the data through team

Table 1. Participant Information

Pseudonym	Age	Years of Experience	Years as a Preceptor	Setting	Hours Spent With Students in Clinical Experience, per Day
River	51	28	9	Secondary school	4
Rory	29	4	3	College/University	8
Lennox	27	5	4	Secondary school	7
Sage	40	18	15	Military/Law enforcement	9
Sutton	29	7	7	College/University	7
Rowan	54	21	3	Professional	8
Dallas	40	18	10	Clinic/Hospital	10
Taylor	59	35	2	Secondary school	4
Elliot	49	26	4	Secondary school	5
Nova	34	12	11	College/University	4

consensus and repetitive analysis of the information provided.[12] The CQR method was selected because of its rigorous process for reaching consensus with constant and repetitive analysis of multiple experiences to provide a complete representation of the data. The project was approved by the Indiana State University Institutional Review Board.

Participants

Inclusion criteria included athletic training preceptors who facilitated a student-engaged immersive clinical experience for a minimum of 4 weeks in accordance with the updated CAATE-accredited, professional-level master's athletic training program standards.[6] The immersive clinical experience should have been completed within 12 months of the interview. We used criterion sampling to match the inclusion criteria and 2 methods to identify potential preceptors: (1) social media and (2) the National Athletic Trainers' Association (NATA) research service. We recruited participants through social media on Twitter and Facebook. Each social media post provided detailed information on who was being recruited along with a link to the demographic survey and electronic informed consent (Qualtrics Inc, Provo, UT). We also recruited via e-mail from the NATA distribution list of athletic trainers who are current preceptors.

A total of 102 preceptors completed the demographic survey. The principal investigator (PI) conducted a total of 12 interviews from among the individuals who responded and met inclusion criteria. Data collection was continued until data saturation occurred as described within CQR methodology.[12,13] With CQR, it has been recommended that there be 10 to 15 participants, but as few as 8 participants is reasonable.[12,13] Based on the information gleaned from the interviews, we determined that saturation had been met due to repetitive information from participants, and thus we were able to proceed with data analysis.[12] Participants consisted of 4 females (40%) and 6 males (60%), with an average age of 41 $\pm$ 18 years. Participants also had an average 7 $\pm$ 8 years of experience as a preceptor (Table 1).

Instrumentation

The demographic survey was used to gather the participants' age, years of experience, practice setting, years of experience as a preceptor, and how many hours a week ATS were engaged in the immersive clinical experience. A script for the semistructured qualitative interviews was developed based on existing literature related to the immersive clinical experience and preceptor perceptions of ATS preparedness (Table 2).[1,14–16] We created questions that would encourage open conversation between the PI and the participant about the immersive clinical experience, their own preparation for this experience, and their perceptions on its influence on ATS. We (C.M.E., Z.J.D., L.E.E.) developed an initial script of 11 questions for the approximately 30-minute interviews, and these were revised on the recommendation of 2 content experts (E.R.N., S.E.W.). These content experts provided feedback on the flow and clarity of the qualitative interview guide as well as on the association of the script questions as they pertained to the original research question. The PI practiced the interview guide in 3 pilot interviews to test the quality and flow of the guide. Participants in the pilot interview were athletic trainer preceptors who had facilitated immersive clinical experiences; however, they had not met the inclusion criteria of having to have done so within the previous 12 months. Pilot data were not included in the results of this study.

Data Collection Procedures

Once participants completed the demographic survey and indicated consent to participate, the PI contacted them by e-mail to schedule an interview. The PI conducted audio-only interviews with participants via teleconferencing software (version 4.6; Zoom, San Jose, CA) The interviews averaged a length of 24 + 11 minutes. At the conclusion of each interview, the audio file was automatically saved to a cloud within the Zoom software. The files were transcribed using the same teleconferencing software as the interviews. The PI deidentified all interview transcriptions, removing names and places of employment before beginning member checking and data analysis.

Data Analysis and Trustworthiness

We used member checking to ensure accuracy.[12] This gave the participants the opportunity to confirm that their answers were accurately represented and allowed them to address and clarify their responses. The data analysis team began the process of coding by reviewing 3 transcripts using an inductive approach. The data analysis team consisted of the PI and 2 other persons (Z.J.D., L.E.E.) with various levels of experience with the CQR tradition. One additional team member

Table 2. Interview Script

Question
1. Do you feel like there a difference between being a preceptor for students engaging in traditional or immersive clinical experiences? a. How so? Or Why not?
2. Describe the preceptor development you've completed to become a preceptor. a. Are you informed of what needs to be taught or assessed with the athletic training students? If so, how? b. Please explain the ongoing preceptor development, if any, that has occurred. c. What is your overall impression of development as a preceptor?
3. Have you experienced any differences in your development to be a preceptor between traditional and immersive clinical experiences? a. Please describe. b. Do you think there should be? How so? Or Why not?
4. Do you prepare yourself, personally, in any way for being a preceptor? a. If yes: In what ways, if any, is preparation the same or different for the traditional and immersive clinical experiences?
5. How do you integrate student(s) into clinical experiences? a. Is this different between the traditional and immersive clinical experiences? How so? Why not?
6. How do you typically schedule student(s) into clinical experiences? a. Is this different between the traditional and immersive clinical experiences? How so? Why not?
7. What does a typical day or week look like during clinical experiences? a. Is this different between the traditional and immersive clinical experiences? How so? Why not?
8. In what ways, if any, do you feel the immersive clinical experience has affected the development of the athletic training student(s)? a. Is this different between the traditional and immersive clinical experiences? How so? Why not?
9. In your opinion, what do you think are the potential effects of immersion on the athletic training student's professional, personal, and clinical skills from an immersive clinical experience? a. In what ways, if any, do you think the immersive clinical experience impacted their understanding of your role as an AT? b. In what ways, if any, do you think the immersive clinical experience impacted their ability to develop professional goals and objectives? c. In what ways, if any, do you think the immersive clinical experience impacted their clinical skills or ability to practice as a clinician? d. In what ways, if any, do you think the immersive clinical experience impacted their preparedness to transition to practice?
10. Is there anything else you would like to share about your experiences and thoughts regarding immersive clinical education?

(E.R.N.) served as the auditor. All members of the team read the transcripts on their own to develop a domain list that was representative of the data. We then met to compare notes and come to a consensus on the domains and to bring forward the core ideas, creating the initial codebook.[12,13] The initial codebook was then applied to 3 of the original transcripts and 2 new transcripts.[12,13] This phase of the process is used to ensure that the codebook is reflective of the data.[12,13] We then met another time to confirm the consensus codebook. During the next phase, the consensus codebook was applied to the remaining transcripts, then internally audited within the data analysis team.[12,13] We met to discuss any differing opinions about the data and to reach consensus.[12,13] Finally, we constructed cross-analyses of multiple participant interviews to make sure that the core ideas were accurately shown and placed in proper categories. At the conclusion of the data analysis process, the interview script, consensus codebook, cross-analyses, and coded transcripts were shared with the auditor.[12,13] Triangulation of the data was ensured and trustworthiness was established by the use of multiple-analyst triangulation, participant member checking, and auditing.[12,13]

The final stage of analysis consists of frequency counting; this allows the research team to establish the frequency of each category across the whole sample. Categories were assigned as *general* if identified in 9 or more cases, as *typical* if identified in 4 to 8 cases, and as *variant* if identified in 3 or fewer cases.[12,13]

RESULTS

Three domains emerged during data analysis related to preceptors' perceptions of immersive clinical experiences within athletic training education (Figure): *exposure, benefits,* and *insufficient training*. Each domain was further broken down into multiple categories, and representative participant quotes were included for each category. The frequency of participant cases per category is presented in Table 3.

Exposure

Exposure refers to the participants' views on the increase in quantity of clinical practice opportunities for the ATS during their immersive clinical experience. Participant responses regarding perceptions of the immersive clinical experience were grouped into 3 categories: *realistic work environment, skill use and refinement,* and *collaborative practice*.

Figure. Domains and categories.

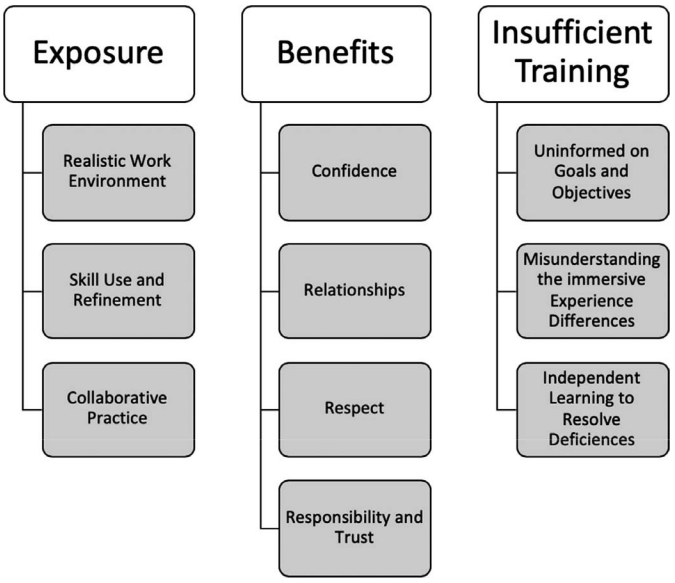

Table 3. Frequencies for Categories

Domain and Category	Counts	Description
Exposure		
Realistic work environment	10/10	General
Skill use and refinement	10/10	General
Collaborative practice	9/10	General
Benefits		
Confidence	10/10	General
Relationships	8/10	Typical
Respect	7/10	Typical
Responsibility and trust	7/10	Typical
Insufficient training		
Uninformed on goals and objectives	9/10	General
Misunderstanding the immersive experience differences	10/10	General
Independent learning to resolve deficiencies	7/10	Typical

Realistic Work Environment. One of the values that was highlighted was the increased realism of the immersive clinical experience. Taylor referenced the lack of classroom constraints as a benefit, stating, "I definitely think the ATS that are in here more often and don't have those class constraints get a much better experience because they really get to truly experience what day-to-day life is."

Outside of traditional settings for athletic training, participants were able to draw from ATS experiences within a nontraditional setting working with tactical athletes. About this unique opportunity, Lennox explained:

> *So, they [the ATS] get to see why almost none of the officers remember the mechanism of injury. When they bring in their injuries it can be because they were in the middle of incidents that trigger their sympathetic nervous system and the adrenaline dump which makes it so they don't remember anything other than they came out alive and then maybe a day later, 2 days later, their knee hurts. So, we don't have the convenience of that, 'well I stepped here, and I felt the snap there.' You just get 'well I was wrestling this guy and there was a lot going on and now my knee hurts. Can you help me?' So, I try to prepare those experiences where they can get a better understanding of the patient population.*

In contrast, some preceptors felt it was important to let specific tasks fall onto the ATS without any direction. River felt that it was important to allow ATS to fail and then use the experience to learn and grow. River noted:

> *So, giving them some real-life exposure, I'm not afraid to let tasks drop so they see that, and they can figure out how to fix it. So, I would say, 'Okay, we dropped the ball on that and how are we going to fix it?' or that kind of situation, so they understand they have to problem solve and think on their feet.*

Skill Use and Refinement. Skill use and refinement within the clinical setting is vital to developing ATS. Participants were adamant that the development of any skill needed to be done in a manner that allowed the ATS to be creative in their own way. River felt that self-development and metacognition of clinical skills was extremely important and noted about the immersive clinical experience: "They really develop their own rhythm and patterns and pay attention to why they're doing things rather than just doing them because somebody's telling them to do them."

Participants also felt that the examination skills and administrative skills of students were improving as a result of the immersive clinical experience. Administrative tasks were being implemented into clinical experiences on a more regular basis. Rory said,

> *I think from a professional perspective, it helps them, especially from the administrative side. I think the ATS leave here with a better understanding of the administrative duties and I think from clinical hands-on with evaluation or treatment it gives us more time to debrief and go over scenarios.*

Similarly, Sutton had been able to use the additional time in the immersive clinical experience to facilitate administrative duties, commenting about the experience, "I'm spending time teaching them about what our [electronic medical record] EMR looks like, how we file secondary insurance and so I think you spend a little bit more time with your immersive ATS."

Collaborative Practice. As recognized health care professionals, it is important that ATS develop working relationships with other professionals. According to the participants, this is important because it allows ATS to see the full breadth of patient care. Dallas remarked about the different services ATS work with in their clinic:

> *. . . getting psych services involved, getting social work involved, getting other experts involved in the care. That's what I think athletic training realistically is about as being a team player, being able to utilize our resources, the best that we can.*

Similarly, participants remarked on the importance of collaborative practice experiences and their importance in allowing the ATS to become more integrated within the health care team. Sutton stated, "It's interprofessional skills, its

interprofessional relationships with [physical therapists] PTs, doctors, coaches, administrators, other staff members, they start to become part of our team."

Some preceptors also commented on collaboration and communication between the different aspects of the patient care circle and the realization of the athletic trainer's role within that circle. Rory stated:

> *So, they get, during that afternoon experience, when school is still in session, a little bit more of the other side of my job that I don't know if the other ATS even realize exists: creating injury reports, answering parents, calling parents, calling physicians, calling a team physician, going to a meeting with our school nurse, all that stuff that you know you don't normally get in a traditional experience.*

Benefits

The benefits domain included the preceptors' perceptions that the immersive clinical experience allowed ATS to improve their clinical practice. Four specific categories relative to perceived benefits emerged from the data: *confidence, relationships, respect,* and *responsibility and trust*.

Confidence. Participants felt that ATS experienced increases in confidence, especially when talking about time spent in the clinical setting. It was stated on multiple occasions that the repetitiveness allowed for increased confidence in performing duties. River postulated, "As an ATS, if I'm there every single day . . . I'm going to take a lot more; I'm going to become a lot more comfortable with my role in that situation, than if I'm coming in less frequently."

Others felt that the freedom they were able to provide to the ATS because of trustworthiness and responsibility were key factors in helping the ATS build confidence. Nova noted that allowing ATS the opportunity to control specific situations provided a boost in confidence, commenting:

> *Being able to let them [ATS] assess an injury right when it happens and letting them take the patient through the rehab[ilitation] process; we can step in when needed. It gives them that confidence of rolling into the world like, 'I already actually did that.' If an emergency happens on the field, letting them take control until you have to step in, giving them that experience before leaving.*

During the interviews, participants described the variety of ways in which they felt ATS were able to mitigate the fears in their clinical practice. For some, having the ATS practice repeatedly with patients in an effective manner showed confidence by allowing them to form a time-efficient method of evaluation. Dallas explained:

> *. . . developing skills that you need to be able to get the most information in the least amount of time with that patient but give them the best experience possible. So, it's programming their mind to try and do that without having to worry about everything else.*

Others felt that the overall experience would allow ATS the opportunity to practice their skills and thus decrease their fears. Sage mentioned, "However, I do believe that by doing clinical immersion, we are able to take away the initial fear."

Relationships. Generally, the participants discussed their expectations about the ability of ATS to form and build relationships. Specifically, participants commented that they expected ATS to be able to talk with patients and administrators through this experience. River remarked:

> *It [immersive clinical experience] enhances their clinical experience because they develop a better relationship with the coaches and the administration as well as the ATS athletes. They [the ATS] interact similarly to the way I do and so that doesn't inhibit their clinical exposure at all. If they were not coming as regularly, then the athletes may not be as comfortable with them or the coaches less willing to take time to listen to them. But, they're pretty much there as much as I am, as well as being available to the athletes, the coaching staff, and administration, so I feel that it helps their clinical experience because it gives them a more accurate view and a more accurate experience.*

Some participants were able to directly relate this to their clinical setting and the specific opportunities to build relationships based on circumstance. Elliot said, about the secondary setting,

> *I don't mind them talking to parents because that's part of the communication line that we have to have in a high school setting because we're dealing with minors. It's trying to train habits and after you've evaluated kids, especially during a game, you go talk to coach and let him know what's going on or go talk to mom and dad because they're usually standing close to the sideline or down on the rail and have this worried look on their face. They need to know what's going on.*

With the increased amount of time spent in the clinic due to the immersive clinical experience, it was mentioned that the stakeholders and administration became more familiar with the ATS, allowing them to form stronger relationships. Rory stated, about the coaches and administration,

> *Our coaches, other staff members, and ATS have more confidence in them. They're a familiar face, they're around all the time, and they're more approachable. I say more approachable, but it seems like they're always here, so you have a better rapport with them.*

Respect. The *respect* category refers to the respect that is gained for the profession of athletic training during the immersive clinical experience. Typically, participants described gaining more respect, relative to the different roles they perform in their specific settings. Lennox remarked,

> *I certainly think that immersive experiences allow them to have a better understanding of the settings. It is a better understanding of all the things an athletic trainer can do especially if they've only ever seen high school and collegiate settings or some of the more traditional settings.*

Participants also discussed the effect that the experience had on the passion of ATS for athletic training and how it fostered more passion for the profession. River stated,

> *I also think that it may be helpful for the ATS to find where their passion lies as far as setting goes. Because they get to see a more detailed view of the ins and the outs and the ups and the downs. Where, before it might not have been such an overall snapshot of what really happens in those settings.*

Responsibility and Trust. Participants also discussed the role the immersive clinical experience played in allowing preceptors to place more responsibility and trust in the ATS. Particularly, if an ATS was with the preceptor as much as another colleague, there was an enhanced relationship and thus an increase in responsibility and trust. Sage explained,

> *You spend literally twice as much time with them in the immersive setting versus the traditional, so you get to know them on almost like a colleague level. And I think it just continues to build that trust. One of my immersive ATS is now my go-to [per diem] provider, because I know them. I trust them. They know my clinic.*

Other preceptors focused on the increased trust between the ATS and the patients, coaches, other staff, and stakeholders. Sage described how the experience allowed the ATS to become a part of the clinic. Sage noted: "They get to actually become part of the clinic, whether it's part of the staff, part of the ATS' lives, part of the department. It just intensifies the experience they [ATS] do get."

Insufficient Training

Along with perceptions of exposure and benefits, the topic of *insufficient training* for preceptors was another domain that emerged from the data analysis. *Insufficient training* refers to the information or lack thereof that preceptors felt was needed in order to provide an immersive clinical experience for the ATS. Data from this domain was categorized into 3 emerging categories: *uninformed on goals and objectives, misunderstanding the immersive experience differences,* and *independent learning to resolve deficiencies*.

Uninformed on Goals and Objectives. During the interviews, participants described a variety of ways in which they were provided information on the clinical immersive experiences for ATS and what the goals and objectives were for them. One preceptor felt that the university the preceptors were receiving ATS from did not provide much in the way of education or direction. Nova explained:

> *I kind of feel like they [the University assigning students] just try to let you go. 'Here are the kids. Here's what they know, here's what they don't know, kind of keep them as you want.' Which was a good thing and a bad thing . . . It'd be nice, but we don't really get that, like, 'hey, if they don't know this, this is what you should do or things like that.'*

Another preceptor felt that institutions were perhaps more focused on the clinical site than the ability of the athletic trainer to be a preceptor. Lennox stated:

> *I had a different school where I didn't even get to the point where I got to find out what kind of development they did [for preceptors] because they wanted to just give me an ATS based on the idea that they used to give my predecessor ATS. So, I had to slow them down a little bit. What makes me nervous is sometimes, I feel like I think more about the placement of the ATS than they do.*

On the other end of the spectrum, it was stated by some that the institutions they received ATS from did try to provide direction and education for preceptors at a minimum of once a year. Sage provided the following:

> *Each of the programs that I've been a preceptor for has had some kind of training or in-service that we've been required every year to participate in . . . It includes just going over some of the CAATE Standards and any changes that they've made to their program.*

Misunderstanding the Immersive Experience Differences. Within the data analysis, we identified perceptions that failed to recognize the differences between traditional and immersive clinical experiences. Nova expressed this:

> *I wouldn't think there's a big difference. I would say the more immersive ones, they just get a little bit more hands-on experience, which is a little bit more intense. Versus just your normal kind of more like textbook education.*

Some found that having to facilitate an immersive clinical experience required them to consider how to fill time. Alternatively, the immersive clinical experience should embed the ATS within the health care system to ensure that ATS are not ancillary to the system. Taylor's comment suggests a misunderstanding of how to curate the immersive experience while it was difficult to find things for the ATS to do with the increased time at the experience:

> *If you have an immersive [athletic training student] who's here all day with the rest of us, it makes it a lot harder. You don't want to give them just [undirected work] work all day. So, what are some other ways you can fill their time. That's not taxing on you because we all have so much we have to get done all the time anyways. So, we ask ourselves, what is the best way we can fill their time so they're getting the most out of the experience versus just giving them mindless tasks to do.*

Others felt that freedom from time constraints meant that the ATS should be able to dictate their own schedule. Rowan stated,

> *I told them [the ATS], 'You tell us when you're available to come out here' and he just shows up when he's available to. It's just kind of a collaboration of what we've got going on at school, plus what his availability is to get here.*

Independent Learning to Resolve Deficiencies. With the lack of direction and education provided, some preceptors found methods of *independent learning to resolve deficiencies* to keep themselves up-to-date on clinical teaching. One preceptor has found online resources that afforded growth as an educator, enabling a better connection with the ATS. Lennox expressed this:

> *I don't know if you've heard of the website coursera.org but, it has open online free college courses. University of Michigan offers a course in health care education. I also did some continuing education units from the NATA's professional development center. I'll usually do whatever is new, in terms of once every other year, to try to keep up with what's new learning theory.*

Others mentioned using ATS evaluations of preceptors to improve upon themselves so that the ATS have a more thorough and well-rounded experience. Sage mentioned the use of evaluations in the preceptors' practice, stating:

> *I think the biggest thing I do is a lot of the programs I work with will have the ATS fill out assessments on us. Before my ATS come in for the first time, I will do my best to try and*

review that to see if there's anything that I might have done that slipped through the cracks to try to improve on it. But really the big thing is I tried to go in with a clean slate, clear mind. That way I'm completely open to their needs moving forward.

Sage also mentioned using the NATA as a source of self-directed education: "and then I'm also working my way through the master preceptor on the NATA site."

DISCUSSION

Within health care education programs, preceptorship and mentorship are vital components in socializing and familiarizing ATS into their future clinical roles through clinical experiences.[10,17,18] Clinical education experiences are critical in the professional development of ATS, mostly because they allow for the opportunity to gain exposure to their chosen future profession.[2,5] Current ATS have expressed the need for hands-on education with real-life experience to truly take advantage of their education.[19] Immersive clinical experiences can be an impactful way for ATS to learn and develop through their clinical education.[7,14] This study identified the perceived impact of immersive clinical experiences on the professional development of the ATS from the preceptor perspective. Our results indicate that preceptors believe that immersive clinical experiences increase exposure and have benefits for the ATS; however, a lack of training for preceptors may limit the benefits.

Exposure

We identified that exposure to immersive clinical education experiences enhanced ATS respect for the profession, allowed for more realistic opportunities to apply both clinical and personal skills, and provided real-life experience pertaining to time commitments of athletic training. Researchers who looked at preceptors' expectations of the immersive clinical experiences suggested that they thought they were already providing a realistic vision of the profession but were finding it difficult to schedule sufficient time for ATS to experience everything due to educational conflicts.[20] Within that same study, preceptors anticipated that ATS would be more engaged in their immersive clinical experience, leading to better preparation to transition to practice.[20] Our study confirmed from the preceptor perspective that immersive clinical experiences provide a multitude of opportunities for ATS to engage in significant, realistic experiences that, with direction from the preceptors, help them develop and refine their skills. It is the role of the preceptor to guide the ATS in this socialization and professional development throughout the clinical experience.[11,21] It is through skill use and refinement that we allow for growth as a clinician, professional, and person.[7] In this study we found that immersive clinical experiences provided a more detailed view of the realities of the profession. Preceptors noted that the increased exposure within the immersive clinical experience allowed for multiple opportunities to practice skills that ATS may not otherwise get to practice. In previous literature, preceptors planned to use the immersive clinical experience to help ATS get more administrative experiences to help them build and foster relationships allowing them to fully understand the responsibilities and benefits of an athletic trainer.[20,22,23] In previous research, preceptors have shared that their primary role is to provide ATS with realistic work environments, through both positive and negative experiences.[21]

Skill practice is important, but critical analysis of the experience, even more so. Critical self-reflection allows ATS to identify potential gaps in their clinical skills, which fosters their ability to be reflective, lifelong learners.[24] The importance of opportunities to experience real-life patient care and interaction when they are preparing to become an athletic trainer is nothing new and not unique, but it does support the importance of clinical education and the necessity for hands-on learning.[25] With proper reflection on those experiences, ATS should learn from them and develop professional expertise by analyzing how their knowledge application and skills develop.[24]

Benefits

Researchers have shown that as beginner practitioners, ATS feel less confident and are more fearful about performing skills when they have not had the opportunity to practice those skills either repetitively or in a real-life situation.[26] Our findings only further support the consensus that when ATS have repeated exposures to clinical practice and skills, they have a greater opportunity for improvement and thus potential for increased confidence.[27] Our study supports the work of Mazerolle and Benes[11] and Bowman et al,[25] indicating that diversity of experiences and mentorship are the primary foundation on which readiness to practice and self-confidence are built.[25]

Previous studies have highlighted the importance of interpersonal relationships in the effectiveness of both the clinical experience and student satisfaction.[28–31] Patients,[29] peers,[30] mentors[31], and clinical teachers[31] can all be considered major stakeholders involved in an experience-rich, supportive relationship, fostering a positive learning environment. Within our study, the ATS engagement in the immersive clinical experience allowed the preceptors to place more responsibility on the ATS because they felt that they were able trust the ATS more. The increase in responsibilities may also provide ATS with situations in which they can begin to formulate their own impressions about effective and ineffective practice. Preceptors in this study suggested that immersive clinical experiences allowed ATS to improve or better establish relationships at the clinical site. Research has shown that relationships are enhanced by a sense of trust and responsibility between instructors and ATS.[32] The experience also provided ATS with necessary practice in communication skills with various people they may interact with during their professional time as an athletic trainer. Developing relationships with different members of the care team was thought to improve the sense of self-worth of ATS and increase their confidence in their own skills within the immersive clinical experience.

Insufficient Training

The lack of quality preceptor training was evident and has resulted in a misunderstanding of what ATS should be doing within the immersive clinical experience, with some preceptors anticipating that the upcoming transition would involve no changes to their methods of clinical teaching. In anticipation of the immersive clinical experience, researchers

have found that a small number of preceptors feel their clinical sites have already achieved the outcomes of an immersive experience.[20] This lack of understanding was evident in the current study, indicating that some ATS had limited experiences in various activities, many of those being administrative duties, interprofessional opportunities, and documentation.

The purpose of clinical education is to provide an environment in which skills learned through didactic curriculum are integrated into real-life experiences.[1] This can become frustrating for the preceptors when they are either not given complete information on programmatic responsibilities or do not know how to achieve the desired outcomes from the programs sending them ATS. Practicing professionals who state that they want to serve as a preceptor should have a desire and willingness to be an effective clinical teacher.[21] Additionally, preceptors who currently do not uphold programmatic standards or who exhibit behaviors that are not congruent with leadership and preceptorship should be considered for removal from that responsibility.[33,34]

Preceptors are often socialized into their role as a clinical teacher informally during their own professional socialization as they become preceptors.[35] However, preceptors also gain an understanding of the preceptorship role during required annual training, in accordance with the CAATE Standards. Participants noted that there was little training done in preparation for them to become a preceptor and little information was provided on the expectations for facilitating an immersive clinical experience. According to the available definitions in the literature,[1] only 1 preceptor within this study had not participated in both a clinical integration model and a clinical immersion model. This suggests that most preceptors in the study should have been able to differentiate the experiences. Preceptors noted that when the immersive ATS had downtime they attempted to find opportunities for those ATS to fill their time with. Situated learning, whereby the ATS is situated in an authentic activity, may widen student exposure and provide more patient encounters.[1] Although many participants discussed using downtime as a means of educating ATS on administrative skills, there were still preceptors unaware of how to create learning experiences without having to create work for the ATS. This finding revealed that most preceptors in this study did not understand how to integrate the ATS into their practice during an immersive clinical experience.

Continuing professional development can help improve communication, decision making, analytics, leadership, and conflict resolution.[36] Some preceptors mentioned the use of educational[37] materials such as the NATA Master Preceptor course, online education courses through other universities, and in-house learning clinics that are meant for coaches but could still apply to the preceptor. As health care professionals it is essential that we think of ourselves as a health care team that allows for a free flow of experiences and learning from multiple health care providers.[37] Some preceptors within this study showed behaviors of lifelong learning by directing their own development in areas of interest, which they hoped would benefit the students they taught as well as themselves.

A primary concern that arises from the interviews is the lack of depth of communication from athletic training programs. Despite the importance of communication, many of the participants expressed a lack of formalized feedback and communication as an area of confusion, creating role incongruity. It is our recommendation that preceptors complete formalized training, specific to immersive clinical experiences, to provide optimal, authentic, and situated learning for ATS.[38] Considering the lack of communication described by the participants, there appears to be a need for more defined and ongoing definition of preceptor duties and responsibilities.

Limitations and Future Directions

At the time of data collection for this study, the CAATE Standard of a 4-week immersive clinical experience was not a requirement. Although many programs had begun to include an immersive clinical experience, we recruited a limited number of participants. As the profession transitions from a bachelor's to a master's degree requirement, we may see more preceptors in a position to share their understanding of how to facilitate students within an immersive clinical experience. As such, we would suggest replicating this study as preceptors gain more experience facilitating this kind of clinical experience.

As we consider future directions in athletic training research, the profession must continue to develop and promote effective strategies for ATS clinical education, support the development of preceptors, and increase the effectiveness of the immersive clinical experience to better support ATS development. The specific parameters surrounding immersive clinical experiences, such as length of experience, number of patient encounters, and frequency of rotations, also need substantial educational research investigation. Collaborations between preceptors and athletic training programs to integrate standardized experiences in clinical education should be evaluated. Further research should also seek to evaluate the long-term impact of these immersive clinical experiences on the students' transition to practice and delivery of patient care. The most critical finding in this study was training insufficiency; therefore, future research needs to explore effective strategies for preparing preceptors to facilitate immersive clinical experiences.

CONCLUSION

Preceptors perceived that the immersive clinical experience exposed ATS to more aspects of athletic training, whether that be providing more realistic experiences or simply spending more time in the environment. The preceptors indicated that immersive clinical experiences were beneficial for the ATS in multiple aspects of their professional development. The training insufficiency and misunderstanding of the immersive clinical experience are concerning, and these aspects could be improved with clearly set goals and objectives, as well as differentiation between traditional and immersive experiences offered by the athletic training program. Athletic training education programs should use this information as a way of anticipating future difficulties with preceptorship in the immersive clinical experience to ensure training and intentionally develop, maintain, and improve the immersive clinical experiences offered.

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