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ORIGINAL RESEARCH

An Exploratory Case Study: Examining the Design of Clinical Immersion from the Preceptors' Perspective

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Context: The clinical immersion experience is a key part of the socialization of the professional athletic training student. Clinical immersion offers the student the chance to experience the totality of the role of the athletic trainer. Programmatic autonomy allows many athletic training educators the opportunity to be creative in the implementation of clinical immersion(s).

Objective: Examine clinical immersion from the preceptors' perspective to understand their opinions regarding the structure of the experience and preferences they may have surrounding clinical immersion structure.

Design: Qualitative exploratory case study design.

Setting: Individual one-on-one video-conference interview.

Patients or Other Participants: Eight athletic training preceptors (6 female, 2 male) completed one-on-one interviews and were 38 ± 6 years old with 10 ± 3 years of experience as a preceptor and 14 ± 7 years of experience as a certified athletic trainer.

Data Collection and Analysis: Semistructured interviews were conducted with all preceptors. Interviews were recorded and transcribed using a video-conferencing software. An iterative approach with principles of phenomenological research was used to code the data. Data saturation guided recruitment and cessation of new interviews. Basic member checks, reflexivity, and multiple analyst triangulation were used to determine trustworthiness.

Results: The following four major themes emerged: (1) preceptors prefer the clinical immersion experience to be longer than the minimum accreditation requirement, (2) preceptors prefer to supervise second-year students in the immersion experience, (3) immersion allows for meaningful relationship development between the preceptor and student, and (4) preceptors treat immersions as a transition to practice mechanism.

Conclusions: Preceptors perceived the clinical immersion experience to be a facilitator of strong preceptor-student relationships and a facilitator of transition to practice. They believed that the clinical immersion should be longer than 4 weeks and occur late in the athletic training curriculum.

Key Words: transition to practice, clinical education, socialization

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KEY POINTS

- The Commission on Accreditation of Athletic Training Education 4-week requirement is perceived to be not long enough for students to integrate into the clinical environment. Athletic training programs should consider implementing at least one clinical immersion experience that is longer than 4 weeks.
- Athletic training educators should consider implementing clinical immersions later in the curriculum to allow for completion of most didactic education and promote a more valuable experience that can facilitate transition to practice.
- The relationships established between students and preceptors during the clinical immersion experience appears to promote improved mentorship.

INTRODUCTION

Clinical immersion is now a core aspect of the athletic training student's professional development. The practice-intensive experience was included in the new standards established by the Commission on Accreditation of Athletic Training Education (CAATE)[1] to help provide a more comprehensive experience for the student in the hopes to give more breadth and depth to the clinical education aspect of their professional development. The rationale behind including at least one immersive experience is to provide the student a more realistic understanding of the profession, increasing the likelihood that the student will gain exposure to the "totality of the care provided by athletic trainers."[1]

The clinical immersion experience was added to the standards to support the concept of transition to practice; a stressful period as one learns to acclimate to decision-making autonomously as well as the nuances of one's new role as a credentialed healthcare provider.[2] As the requirement is in its infancy, research is sparse and needed on the topic. Currently, challenges associated with the delivery and supervision of clinical immersion[3] as well as student's perspectives on the immersion experience itself[4] have been identified in the literature. Preceptors believe that the experience has a positive effect on the student's professional development.[3]

Missing from the literature, however, is feedback on the structure of the clinical immersive experience. The CAATE[1] standards allow for programmatic freedom when designing the immersive experience as long as it is bound by a minimum of 4 weeks and coursework does not detract from the immersive experience.[1] Although the guidelines are pragmatic and simple, little is known whether 4 weeks is a sufficient time period for the student to gain an appreciation for the totality of the profession. Moreover, preceptors provide a critical role in facilitating clinical education for the student; thus, their experiences and thoughts are important. The purpose of our study was to examine clinical immersion from the preceptors' perspective. Our primary focus was to gain a sense of the preceptors' opinions regarding the structure of the clinical immersion experience as well as any preferences they may have surrounding the design of the clinical immersive experience.

METHODS

Research Design

We used a case study research approach to gather an in-depth understanding of the clinical immersion experience, from the preceptor perspective.[5] A core tenet of a case study design is to explore a phenomenon as it is occurring from those directly involved and to ensure boundaries with inclusion. Our exploratory[6] case was bound by preceptors who had previous experiences with supervising athletic training students in traditional clinical education experiences, as well as currently with immersive clinical experiences. We selected an exploratory case study design as the clinical immersion requirement for CAATE-accredited programs is still in its infancy and much needs to be studied on the phenomenon.

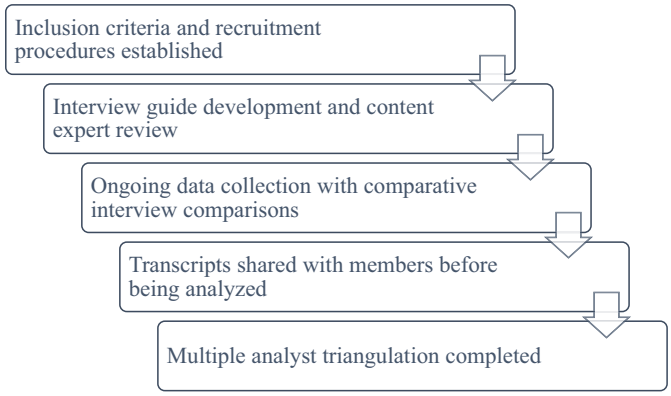
Recruitment

The Consolidate Criteria for Reporting Qualitative Research (COREQ) checklist[7] was used to provide the framework (Figure 1) and quality measures to ensure the data presented in this paper are credible and trustworthy. Our sample was recruited using the following binding[6] criteria: (1) has supervised an athletic training student in a traditional clinical experience, (2) has supervised an athletic training student in an immersion experience within the last 6 months (i.e., before data collection), (3) has supervised more than 1 student in an immersion experience, and (4) has had a minimum of 3 years of preceptor experience before data collection. We secured institutional review board approval before recruiting our participants. We sent recruitment emails to program directors and clinical education coordinators within postbaccalaureate programs listed on the CAATE website as offering a professional athletic training program at the graduate level. The email instructed the program director/clinical education coordinator to forward our email to any preceptor meeting the criteria mentioned previously or provide the contact information of preceptors meeting these criteria.

Participants

In total, we interviewed 8 athletic training preceptors (6 female, 2 male) who met our inclusion criteria. After the eighth interview, saturation[8] was determined as no new information was gained during the interview. The average age of the preceptor was 38 $\pm$ 6 years, and the athletic trainers had 14 $\pm$ 7 years of experiences as a certified athletic trainer and 10 $\pm$ 3 years as a preceptor. All of our participants were employed in the collegiate setting. Table 1 provides individual demographic data for each preceptor. Our binding criteria was specific, lending a small sample size, purposefully. Our sample size of 8 preceptors aligns with the exploratory case study design[5] and research published using similar methods.[8]

Figure 1. Method design.



Data Collection Procedures

Instrumentation. We developed a semistructured, open-ended interview protocol to address our research questions. The protocol was developed by the authors of the study (n = 3) and was informed by previous qualitative studies in which researchers investigated clinical education and immersion.[3,4,9–12] The interview template was sent to experts (n = 3) in the field to review for intent, relevance, and clarity.[13] These experts were selected based upon their knowledge of clinical education, immersion, and qualitative research method. The 3 experts were independent of the study protocol but provided critical appraisal of the interview protocol. Changes were made to the protocol, upon review of the feedback; these changes included rewording of questions for clarity, reordering for flow, and adding a few demographic questions.

Once this process was completed, we piloted the interview guide to ensure the flow of the interview as well as clarity of the questions. We performed the pilot study with a small sample (n = 2) that matched the study sample characteristics.[13] No changes were made to the interview guide after the pilot test, and the participants are included in our sample. The final interview guide can be seen in Table 2.

Procedures. Following the completion of the written consent process, all participants took part in a one-on-one interview with the first author. During each recorded interview, the first author took notes, to create a constant comparative approach to determine saturation of the data. For all interviews, we followed a semistructured interview script to allow for a more natural conversation to occur between the interviewer and participant. Selecting the individual semistructured interview approach was purposeful as we felt it aligned with previous research on perspectives of clinical immersions in athletic training.[3,4,14] It also allowed us to better understand lived experiences of the preceptors and their thoughts on clinical immersion.[3,4] All interviews were conducted using the Zoom platform.

All interviews, which lasted approximately 95 ± 19 minutes, were then transcribed using the Zoom transcription function. The lead author listened to the audio recording while reading the transcripts to ensure accuracy. Any errors were corrected during review to appropriately reflect the interviewees thoughts. After deidentifying all transcripts, they were emailed directly to the participant for member checks. We gave the preceptor 1 week to review their transcript; if no communication was received after 1 week, the researcher assumed the transcript was accurate and proceeded with the analysis.

Analysis and Credibility

As the fundamental principle of the case study framework is understanding a phenomenon,[6,8] we chose to inductively code the data using the phenomenological approach. Using multiple analyst approach to coding, the first 2 authors completed the analyses independently, before negotiating the final themes. The first author was able to gain data immersion as the interviewer and the completion of a constant comparative analysis to determine saturation. The second author gained immersion by reading the transcripts multiple times before coding the data.[8] The authors discussed the steps before coding, independently, and agreed on the process. Each review of the individual transcripts included note taking and labeling of chunks of data with codes to represent the meaning of the portioned data. Then, similar codes were grouped together, and data were extracted to capture the operational meaning of the code. The code was then categorized to represent the overall meaning of the theme. Only those themes that represented more than half of the participants were included in the final analyses.

Several strategies were used to establish rigor and trustworthiness of the data. First, data saturation was used to guide the recruitment of participants, which has been discussed previously. Second, expert review was used to establish validity of the interview guide, which is a process that was discussed above. Third,

Table 1. Individual Demographic Information

Pseudonym	Sex	Years Certified as an AT	Total Years as a Preceptor	Years as a Preceptor for Graduate Program	Number of Students Supervised in a Clinical Immersion	Level of Student Supervised in Clinical Immersion	Length of Shortest Immersion Supervised (Weeks)	Length of Longest Immersion Supervised (Weeks)
Brittany	Female	10	6	2	2	Year 1 and 2	2	39
Lisa	Female	9	7	1	1	Year 1 and 2	6	13
Tom	Male	24	8	8	4	Year 2	10	10
Fran	Female	10	8	4	3	Year 1 and 2	5	15
Kerry	Female	25	19	3	6	Year 2	15	15
Christy	Female	14	10	3	2	Year 2	6	15
Josh	Male	6	5	3	6	Year 1 and 2	4	16
Mary	Female	16	16	2	2	Year 2	4	16

Table 2. Interview Questions

1. Why did you decide to become a preceptor?
   a. What factors influenced your decision to be a preceptor for an athletic training clinical immersion?
2. Describe a typical day with a student during the clinical immersion experience (schedule, activities, student responsibilities, preceptor responsibilities).
3. In what ways, if any, has your role and/or responsibilities changed as a preceptor and athletic trainer when hosting a clinical immersion compared to a traditional, integrated clinical education experience?
   a. *In what ways, if any, has your role and/or responsibilities remained the same as a preceptor and athletic trainer when hosting a clinical immersion compared to a traditional clinical education experience?*
4. How do you personally feel about the addition of the clinical immersion experience and its impact on clinical education and transition to practice?
   a. *What advantages, if any, do you believe the clinical immersion has for students' professional development?*
   b. *What disadvantages, if any, do you believe the clinical immersion has for students' professional development?*
5. How do you personally feel about the requirements of students during the immersive experience?
   a. *How do you personally feel about the requirements of the program that you precept for regarding the clinical immersion?*
   b. *How do you feel about the length of the rotation?*
   c. *How do you feel about the time the students are required to be in the clinic?*
   d. *Describe your thoughts on the experiences required during the immersion.*
6. Share your own personal thoughts on the time students are expected to spend in clinical immersion, in specifics to the ability for the student to "see it all"?
   a. *How do you perceive the increased time at the clinical site impacts student engagement/involvement?*
   b. *In what ways, if any, has the increased time at the clinical site impacted the quality of the students' experiences?*
   c. *How does the clinical immersion facilitate more experiences for the student compared to non-immersive experiences?*
7. What expectations do you have of students during the clinical immersion experience?
   a. *Are your expectations for students different in the immersion experience compared to the integrated experience? If so, could you describe how they differ?*

basic member checks were completed with the participants. Each participant was given the chance to review their transcripts before coding began to ensure accuracy. All transcripts were accurate, and no revisions were made by participants. Fourth, the authors completed reflexivity and each discussed their own professional experiences as current or former clinical education coordinators. The goal of reflexivity is to address any biases that can influence coding and is primarily a way to help provide the study with rigor. Experiences within the role of the clinical education coordinator helped provide background to better understand the lived experiences of our participants. Finally multiple analyst triangulation was completed to ensure the coding process was free of bias and that the results were representative of the overall experiences of our participants. Triangulation is fundamental part of the case study design approach, as it allows for the data to be explored from multiple perspectives[5] and ensures those perspectives accurately report the data.

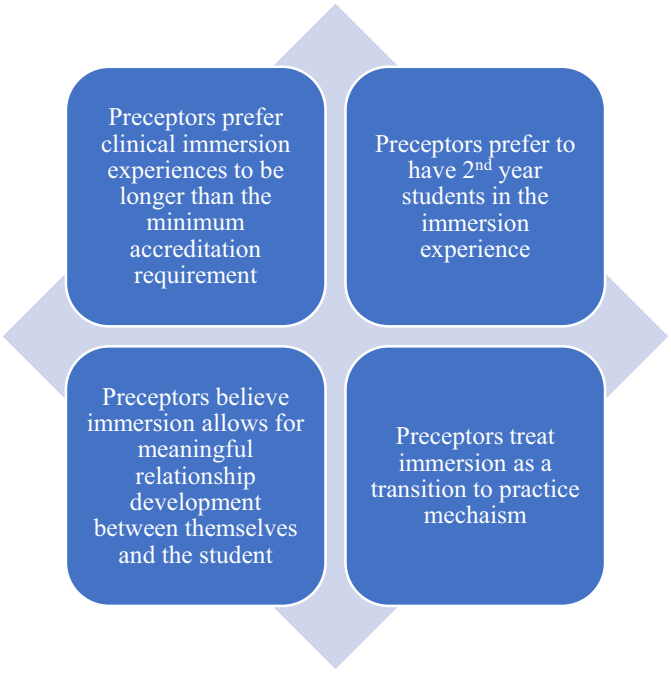
RESULTS

Four major themes arose from the data (Figure 2). Our themes speak to preceptors' current experiences with immersion and their preferences around the structure of the experience. Themes and quotes to support the final themes are presented next.

Theme 1: Preceptors prefer clinical immersion experiences to be longer than the minimum accreditation requirement.

All of our preceptors discussed their partiality to a clinical immersion experience that was longer than what the CAATE standard of 4 weeks requires of a program. The longer clinical immersions for our participants allowed for a better experience for the student as it takes time to acclimate to a site and for the student to gain their footing for success. Many of our preceptors discussed the need for time before learning could truly happen. Kerry stated, "it takes about a month to get integrated into a team where you have trust, and they will go to you. . .the team really sees them as part of their medical

Figure 2. Overall findings.



staff." Tom, like Kerry, talked about the student needing time to acclimate, and learn the ropes before they truly can apply their skills and learn more. Tom shared,

> *Anytime that you get to a new clinical [site], you're going to be a little bit timid because you don't know how things run…I want to say it's somewhere around that three-to-four-week mark that [the students] really break out and start doing things on their own and don't have to be led or asked to do something.*

A few of our preceptors talked about immersion needing to be long enough for a true appreciation of the athletic training role; without time, the student cannot truly gain a full, authentic perspective. For example, Christy shared, "I [personally] don't think that you can get an adequate sense of what [athletic training] is like in a half of a semester or less." Brittany who had supervised students in 2-week intensive, immersive-like experiences, up to a 39-week immersion, shared, "the immersion has to be long enough for them to see what a day-to-day can look like. The shorter ones, are tough." Lisa, like the others, shared, "immersion gives them such a more realistic idea of what the profession entails. I believe immersions are crucial for the student." Mary felt the longer immersions "mimic real-life, while working with a team from the beginning of the season to the end."

Theme 2: Preceptors prefer to supervise second-year students in the immersion experience.

Six of the 8 preceptors discussed preferring a second-year student over a first-year student, mostly on the premise that second-year students were more ready to immerse themselves in the athletic trainer role and were less timid in their development as a student. Tom, shared, "I loved working with the second-year student, it gives them an opportunity to appreciate the whole picture, and develop those relationships, get involved with the care of the athlete, and be a part of the staff. The timing is good." Brittany had similar thoughts as Tom about her preference for a second-year student. During her interview she compared her first-year student to her second-year student. She shared,

> *My first-year student is shy, timid. They know some things, but they are still learning. I bring them along for the day, but it's focused on the basic skills and application of what they are learning. Although I push both students, the second year, is going to be certified soon, so I am in earshot, but I let them take control. I really try to have them take lead and think through the process.*

Mary shared, "the second-year students are ready to do more, and my job is to continue to challenge them and grow their confidence when they are with me." During her interview, Mary compared her experiences with both first- and second-year students, and although she welcomed either level felt "the second-year students are able to be more integrated into the everyday aspects of the role; it's like they are part of the staff." Kerry, enjoyed the second-year students and preferred working with them because, "they are helpful, more qualified to be active." She continued to discuss her current second year student "they are ready to be independent, and they are functioning with autonomy that is more guided, and less hovering. Honestly, they are a second set of hands for me."

Theme 3: Immersion allows for meaningful relationship development between the preceptor and student.

The immersion experience allowed for the relationship between preceptor and student to flourish, as they had more time together. Five of our preceptors discussed the relationship building of the immersion experience. Our preceptors recognized that because the immersion student was able to be present throughout the day for an extended period, they were able to develop a deeper relationship. Lisa discussed the value of immersion, in comparison to the traditional model of clinical education; recognizing the immersion experience allowed for a better relationship between herself and the student. She shared, "the old way [traditional clinical education] felt more like an observation experience, with no relationship building. With the immersion they are really sucked into the day with me, and we have a lot more opportunity to engage." Josh shared, "I am able to work closely with my student, it helps build rapport."

Mary enjoyed supervising immersive students because of the time it allowed for getting to know her student. She reflected,

> *There is more facetime with the immersion experience. It allows them to be there longer during the day, they see more of an actual day, I feel like it is more eye-opening to them, but also allows us to get to know one another. The rapport we build is great, for me and their confidence as an athletic trainer.*

Kerry discussed the positives of the immersion experience, as it allowed for more time with the student. She liked the model, "it offers more time to teach, and work with the student. We are able to develop a relationship, like they are part of the staff."

Theme 4: Preceptors treat immersion as a transition to practice mechanism.

Our preceptors described immersion as an extension of the onboarding process for the student. For example, Christy said, "it's that last chance to become integrated, and ready." She went on to describe the immersion experience offered to her students, "our staff brainstormed ideas, we wanted them to experience things, before they are dumped into the real world, on their own." Tom discussed the immersion experience as a segway to clinical practice, so he treated his students as "part of the team." He shared,

> *After they come to me, they are going to be practicing clinically. So, they should be fairly comfortable with everything, and those immersive students should be as autonomous as possible. They will need to be prepared to make decisions when they have a full-time job.*

Lisa shared, "we get them involved with everything, they are there to develop the relationships, get comfortable being the role of the athletic trainer, as it is coming, very soon." Josh believed the immersion experience is an important part of the student's readiness to transition. During his interview, Josh talked about the value of the experience as a way to get the student really involved: "the full immersion experience, it allows them to be treated like a staff member. They attend our staff meetings, we bring them to coaches meetings, and if there are opportunities to present a case, they do."

DISCUSSION

Clinical immersion experiences are now important programmatic practices for the professional socialization of the athletic training student.[15] Despite it being a requirement for all CAATE-accredited programs,[1] little is understood about the immersion experience itself, particularly from the preceptors' perspective. Preceptors are a key facilitator of effective clinical education experiences, and yet their input can be overlooked particularly from a research perspective. Our study uniquely contributes to the literature, as it includes preceptors who have experience with both traditional and immersive experiences for clinical education.

Our goal with this study was to better understand preceptors' experiences and thoughts around the structure of the immersion experience, as the standard is relatively new and program autonomy offers flexibility in the experience. We found that preceptors value the experience for relationship building and use it as a scaffolding mechanism for transition to practice. Our preceptors believed that immersion was best when they were supervising second-year students who were completing immersion experiences that were longer than 4 weeks.

Clinical Immersion Length

Although preference for immersion experiences longer than 4 weeks is a new finding in the athletic training profession, it aligns with the commentary by Scifers[16] who urged programs to include more immersive experiences than required by the CAATE and mirror other healthcare programs. Here, we suggest that programs should consider offering longer immersion experiences that are comparable to other health profession curriculums. For example, master degree-level occupational therapy programs require 24 weeks,[17] and physical therapy requires 30 weeks of full-time clinical experience to occur by the end of the program.[18] Nursing students favor a 7- to 12-week clinical immersion experience as it allowed them to have a suitable introduction to the clinical setting, become acquainted with the healthcare team, and gain independence to improve self-confidence.[14] We believe our results only suggest that clinical immersion experiences total more than 4 weeks during the totality of the program. This time allows program administrators to be creative in academic planning to allow for longer immersions within the curriculum. Some examples of creative academic planning include hybrid courses in which student participate in the course synchronously for part of the semester and asynchronously while in the immersive experience. Additionally, administrators could leave the traditional semester length of 16 weeks in favor of longer semesters that allow for the incorporation of longer immersions.

Professional Student Level

Currently no guidelines exist for programs beyond the length of the experience and coursework allowances during the immersion. Our preceptors valued having students who had completed more of their didactic coursework, as it allowed them to be more engaged in the hands-on learning. The goal of clinical education is to allow the student to gain confidence in their skill application, with succession to competence as a clinician.[19] The more realistic, and engaged the experience is, the more the experience prepares the student to enter the workforce and transition from student to clinician.[20] If the student possesses more knowledge and skills, they will likely be more actively engaged in their learning.

Our preceptors integrated the students into their staff to acclimate them and allow them to experience the totality of the role of the athletic trainer. Programs should consider placing the clinical immersion toward the end of the program as this timing allows students to complete most of their didactic coursework and may serve to boost students' confidence to function in an autonomous learning environment. We know that immersion creates a realistic work environment for skills use, implementation, and refinement.[21] Thus, a student will be prepared to implement those skills, due to proper training, before entering the immersion, which will possibly create a more successful experience. Although preceptors in our study preferred students who had completed most of their athletic training curriculum, we acknowledge that some programs may face challenges to implementing a clinical immersion toward the end of the athletic training program. Program administrators who incorporate immersive experiences early in the program should take care to educate preceptors on the students' previous development, knowledge level, and specific goals of the clinical experience to guide preceptors in their facilitation of the clinical immersion to meet the student's unique learning needs.

Positive Relationships

The benefits of the clinical immersion experience include the ability to develop and form relationships with members of the sports medicine community.[21] Our findings add to the literature by illuminating the improved relationship between the preceptor and the student, as they had more time to cultivate the relationship. The improved relationship, as perceived by the preceptor, that develops between them and the student allowed the preceptor to provide autonomous practice but also more mentorship. Mentorship is a key mechanism for supporting the student preparing to transition to practice as well as those who have transitioned.[15,22,23]

A strong relationship between the preceptor and student allows the preceptor to understand the strengths, challenges, and aspirations of the student.[23] When preceptors have an understanding of the students' strengths, challenges, and aspirations, they can gauge the student's zone of proximal development[24] and better incorporate tasks and knowledge that promote learning. In this case, the preceptor believes continued independent clinical practice is supported by mentoring the student. The ability to provide this improved mentoring was largely related to the increased length of the clinical experience as the student was present all day.

Supports Transition to Practice

The overall goal of clinical education is to help the student assimilate to the role of the athletic trainer. Criticism to the traditional model of clinical education was a true lack of understanding of the day-to-day roles and responsibilities of the athletic trainer, which is why immersion was added to the CAATE standards.[4] Our preceptors believed the immersive experience was a positive element to the student's development, as it was a structured mechanism to support transition to practice. Researchers suggested that the student has more patient encounters in a clinical immersive experience than a

traditional one, as well as exposures that extend beyond just the traditional precompetition, postcompetition, or practice preparation and treatments.[15] Legitimation[25] is an important part of the socialization process. As demonstrated by our findings, preceptors include their students who are engaged in clinical immersion as staff members, which is a feature of the clinical immersion that provides a scaffolding for their transition from a student to practitioner. The transition to practice mechanism of the clinical immersion may be strengthened by program administrators who emphasize the value of legitimation[25] and present ways to incorporate it into the clinical immersion experience during preceptor development programs in preparation for the clinical immersion.

Limitation and Future Directions

The preceptor perspective on the immersion experience has been needed in the literature. But to further develop the best clinical immersive experience guidelines, educators must include considerations from all stakeholders. We believe that future researchers should include all stakeholders in the immersive experience to better understand how to best structure the experience for the student. All of our preceptors were providing supervision at the collegiate setting. Although the purpose of our study was not to understand how employment setting influenced the experiences of our preceptors, we note that future researchers should better understand how immersion experiences are best facilitated at each employment setting. Data were collected during the COVID-19 pandemic, and although we met data saturation, we do recognize that a case study design may warrant additional research including perceptions from more preceptors in various settings. Future researchers need to quantify more of what we found, such as the length of the experience, as well as the academic standing of the student and its effect on the outcomes of the clinical experience. We did find that the length of the experience had an effect on the preceptor and, from their vantage point, also on the student. We did not quantify length, beyond perceptions of what the preceptor supervised; thus, future researchers should determine a more quantifiable number.

CONCLUSIONS

In this study, we examined the clinical immersion from the preceptors' perspective, specifically aiming to understand the opinions and preferences of preceptors regarding the structure of the clinical immersion. We present important considerations for athletic training educators to study as they map and implement the clinical immersion into athletic training curriculums. Preceptors in our study estimated that the current 4-week CAATE[1] requirement is equivalent to the amount of time that students need to acclimate to the new clinical environment and preferred the clinical immersion to be longer than 4 weeks. Athletic training educators should consider offering immersion experiences that are longer than 4 weeks and are more comparable to those used in other healthcare professions.[14,16,18] Preceptors in our study also reported treating the clinical immersion as a transition to practice mechanism, allowing students to have a lot of autonomy. Preceptors felt that students who had completed most of their didactic work were better able to take advantage of the supervised autonomy. Based on our findings, we recommend that the clinical immersion be placed toward the end of the athletic training curriculum. Finally, we found that the clinical immersion allows for stronger relationships to develop between the preceptor and student. Programs should acknowledge the quality of mentoring that this relationship facilitates and consider this benefit when placing students with clinical immersion sites. Considering the transition to practice mechanism and strong mentoring relationships that occur within the immersive experience, aligning the clinical immersion with the students' professional setting goals may allow for a smoother transition to practice upon certification and graduation.

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