

Athletic Training Students' Mental Health Recognition and Referral Skills, Part 2: Perceptions of Pedagogical Strategies

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Context: The increased prevalence of mental health conditions and the use of telehealth for patient care have exposed gaps in athletic training professional and continuing education. Here, we explore athletic training students' perceptions of virtual pedagogical strategies for the delivery and application of concepts related to mental health recognition and referral, which may help educators determine best practices.

Objective: To examine students' experiences and perceptions of Mental Health First Aid (MHFA) training, case-based learning, and standardized patient encounters.

Design: Qualitative portion of a sequential, explanatory mixed-methods design.

Setting: Individual interviews via video conference.

Patients or Other Participants: A convenience sample of graduate athletic training students from Commission on Accreditation of Athletic Training Education-accredited professional athletic training programs who participated in the MHFA training and secondary encounters were recruited. Twenty-two participants (11 from each intervention group; 45.5% male, 54.5% female; age = 24.59 ± 2.3) were interviewed.

Data Collection and Analysis: Interviews were recorded using Zoom and then transcribed. The Qualitative Analysis Guide of Leuven method was used to analyze the data to determine emergent themes. Strategies to enhance trustworthiness included an audit trail, member checks, and peer debriefing.

Results: Five higher order themes emerged from the interview data, as follows: (1) perceived value of MHFA training, (2) engaged learning and facilitated feedback, (3) capability, (4) comfort and confidence, and (5) authenticity. These themes were organized into the following 3 overarching dimensions: knowledge, skills, and pedagogy. Participants described how the opportunity to apply their knowledge and practice their skills with an athletic training-specific scenario helped them feel more equipped for future patient care.

Conclusions: Regardless of simulation strategy, the opportunity to practice influenced participants' knowledge and feelings of confidence and capability. The MHFA training and simulated encounters were engaging techniques that incorporated feedback and provided elements of authentic patient interaction.

Key Words: virtual educational simulation, mental health, confidence, case-based learning, standardized patient encounter

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KEY POINTS

- Athletic training students perceived Mental Health First Aid training as a beneficial method to acquire knowledge about mental health challenges; they found it provided a useful way to approach individuals experiencing mental health challenges and to distinguish crisis situations.
- Simulation activities with standardized patients and case-based learning were perceived to increase students' capability, comfort, and confidence in mental health recognition and referral.
- Engaged learning via peer interactions and facilitated feedback in the form of real-time debriefing were key facilitators of student learning in these simulated activities.

INTRODUCTION

Mental health concerns affect 16.5% of those aged 0–17¹ and 22% of those over 18.² Due to the prevalence of mental health conditions, it is vital for athletic trainers (ATs) to be prepared for mental health screening and referral. The Board of Certification's updated practice analysis more explicitly references behavioral and mental health concerns.³ Therefore, ATs may be seeking more resources in this area from continuing education providers. Likewise, the most recent standards from the Commission on Accreditation of Athletic Training Education (CAATE) include an increased focus on mental and behavioral health.⁴ Although various strategies for mental health education could meet these needs in athletic training, Mental Health First Aid (MHFA) training provides a standardized and interactive option.

Although MHFA was originally designed for the general population, a variety of health care professions have incorporated it into their professional or continuing education.^{5–10} The training focuses on recognition and referral to increase mental health literacy and to reduce stigma.⁵ MHFA has been investigated as a continuing education offering⁹ within athletic training and also within a comprehensive mental health curriculum at 1 CAATE-accredited institution.¹⁰ A more robust examination of MHFA has yet to be conducted with subsequent pedagogical interventions to enhance participant confidence and learning of content knowledge within professional education.

Beyond didactic training, application-focused interventions such as simulation can be used to improve individuals' competence and confidence. Here, we use 2 types of simulation: standardized patients (SPs) and case-based learning (CBL). Although SPs are trained individuals portraying a specific patient or case, CBL involves the examination of a realistic case without interaction with the patient.

The literature on simulation in healthcare education has included both objective measures of improvement and qualitative evaluation of the experience. Quantitative exploration has included a

pretest and posttest evaluation of learning^{11–14} and an assessment of confidence.^{11,12} Researchers of qualitative studies have considered the perceived experience of professionals with simulation during their own educational training,¹⁵ postsimulation debriefing,¹⁶ and student participants' reflections on exposure to simulation.¹¹

Although past researchers have provided baseline knowledge of simulation's effectiveness, the generalizability of these studies may be limited due to sample size and homogeneity. Because the integration of simulation varies across programs, which are given curricular autonomy, researchers of many of these studies have used convenience samples of 1 cohort or institution.^{12,14,16} We need to continue to explore simulation in athletic training education across content areas, geographical locations, institution types, and preparation methods.

Simulation has been used in athletic training for high-risk, low-exposure skills, such as cardiopulmonary resuscitation,¹¹ face mask removal,¹² and management of heat illness,¹³ to provide realistic exposure and feedback. Mental health recognition and referral could also be considered a high-risk, low-exposure skill, and therefore, understanding methods for teaching and assessing this content area is important.

In this study, we focus on mental health recognition and referral by using simulation in a virtual environment, which differs from previous literature in which researchers focused either on the content area or the medium, not both. A study with a virtual SP encounter focused on musculoskeletal evaluation showed improved athletic training student confidence in patient care.¹⁷ Researchers of a longitudinal follow-up study examined participants' perceptions of a face-to-face mental health emergency SP encounter and reported how it improved clinicians' empathy, active listening, and emergency planning.¹⁸ In another study, investigators found positive student reflections of face-to-face MHFA and SP encounters.¹⁰

Since the exploration of MHFA, CBL activities, and SP encounters conducted virtually are limited in the athletic training literature, we aimed to understand students' perceptions of these virtual pedagogical techniques. The following questions guided this study: (1) What are participants' perceptions of a virtual MHFA training? (2) What are participants' perceived experiences of a virtual SP encounter? (3) What are participants' perceived experiences of a virtual CBL activity?

METHODS

This sequential, explanatory mixed-methods design was divided into 2 phases, as follows: quantitative followed by qualitative. Phase I¹⁹ is published as a separate article. Here, we focus on Phase II that involved individual interviews used to examine participants' perspectives.

Figure 1. Qualitative interview guide.

Frame: I would like to first learn about your experiences prior to completing the Mental Health First Aid (MHFA) training and intervention (case-based learning [CBL]/standardized patient [SP]).

- Describe your past experiences with patients with mental health challenges.
 - During clinical experiences/patient care, what has your interaction with patients experiencing mental health challenges been like?
 - How much exposure have you had to patients experiencing mental health challenges?
- Prior to participating in this study, what was your understanding of and experience with the intervention (CBL/SP)?
 - How often have you experienced intervention (CBL/SP)?
 - In what environments have you experienced the intervention (CBL/SP)?

Frame: I would now like to turn our attention to the current experience with MHFA and the intervention (CBL/SP).

- Describe how MHFA training and the intervention (CBL/SP) may influence how you view patients who are experiencing mental health challenges.
 - What attitudes did you have before the experience and have they changed at all?
- Describe how this experience may change your interactions with patients with mental health challenges.
 - Have you noticed changes in your verbal or nonverbal communication?
- How did this experience impact your comfort in facilitating difficult conversations with patients with mental health challenges?
 - How did it influence your comfort in forming questions?
 - How did it influence your comfort in responding to patient's answers?
- How did this experience impact your ability to control your emotions when having difficult conversations with patients?
- What did you learn about your own knowledge, skills, and abilities as a result of this experience with MHFA training and intervention (CBL/SP)?
 - Did any personal limitations emerge?
- How did this experience impact your confidence in recognizing and/or referring a patient with a mental health condition?
- How realistic was the experience?
- Explain how this experience was beneficial for your professional education.
- How could MHFA and intervention (CBL/SP) supplement experiences you've had with patients?

Participants

A convenience sample of graduate students from CAATE-accredited professional programs were invited to participate in individual interviews after their experience with MHFA training and either a CBL activity or SP encounter. These students had prior experience with simulation (eg, task trainers and mock patients) but had not completed MHFA training before the study.

Recruited programs required their students to participate in MHFA training. Institutional cohorts were randomly assigned to 1 of the 3 intervention groups (MHFA only, MHFA + SP, or MHFA + CBL). Individual students volunteered to participate by completing the informed consent and pretests. Three to 4 weeks after the MHFA training, the CBL or SP interventions occurred, and posttests were distributed. Upon posttest completion, participants were automatically directed to a separate follow-up survey to indicate their willingness to participate in individual interviews. Those participants from the MHFA + SP and MHFA + CBL groups who volunteered to be interviewed were contacted to arrange an individual videoconference.

Institutional review board approval was granted by Rocky Mountain University of Health Professions. Although participants completed an electronic informed consent process as part of the pretest, the informed consent was also verbally reviewed with each participant immediately before the interview commenced.

Interviews

Semistructured interview guides were reviewed by an experienced qualitative researcher (WAP) and then piloted with 3 athletic training students not involved in the study to ensure question clarity and flow.²⁰ The finalized interview guide can be found in Figure 1. ASA conducted the interviews. The interviews were

recorded using Zoom and then transcribed. Each interviewee was assigned a pseudonym to protect their identity; the master key was kept in a password-protected cloud-based folder. Interviews lasted 30–45 minutes.

In the CBL group, data saturation was reached after 7 participants. However, 11 individuals were interviewed to allow for the representation of all applicable cohorts. For the SP group, 11 interviews were conducted. Data saturation was reached after 9 participants, but interviews 10 and 11 commenced as they had already been scheduled.

Participants Demographics

Interviewees from the SP group represented 4 NATA districts with an average age of 25.73 ± 2.76 . Of these 11 individuals, 4 identified as women and 7 identified as men. Three men and 8 women aged 23.45 ± 0.82 from the CBL group were interviewed; they represented 3 NATA districts. Full demographics are found in Tables 1 and 2.

Data Analysis

Emergent themes from the interviews were established using the Qualitative Analysis Guide of Leuven method, a technique inspired by the grounded theory approach²¹ for which symbolic interactionism provides a framework to examine the meaning an experience has along with the contextual sources of such meanings and how they may change over the course of an experience.²² The Qualitative Analysis Guide of Leuven method includes the following steps: (1) thorough reading of interview transcripts, (2) writing a narrative interview report, (3) creating a conceptual interview scheme, (4) testing the scheme via dialogue, and 5) comparing the scheme to the transcripts.²¹ The actual coding process was conducted in Atlas.ti (version 9.0 Mac;

Table 1. Participant Demographics: Standardized Patient Encounter

Pseudonym	NATA District	Age	Gender	Semesters Completed ^a	Undergraduate Degree
Sara	5	23	Woman	5/6	Allied health
Tom	5	23	Man	5/6	Allied health
Peter	5	26	Man	5/6	Kinesiology
Jayden	5	31	Man	5/6	Exercise science
Shawn	4	26	Man	6/7	Exercise science
Natalia	11	25	Woman	3/5	Human nutrition, foods and exercise
Dave	11	28	Man	3/5	Athletic therapy
Christopher	4	24	Man	3/4	Exercise science and kinesiology
Ann	7	26	Woman	3/5	Sports medicine and taekwondo
Micah	7	29	Man	3/5	Physical therapy
Sophia	7	22	Woman	3/5	Sports and exercise science

Abbreviation: NATA, National Athletic Trainers' Association.

^a Summer and interim sessions were included by some participants.

ATLAS.ti Scientific Software Development GmbH) and involved (6) developing preliminary codes, (7) linking fragments to codes, (8) analyzing concepts, (9) developing a conceptual framework, and (10) describing essential findings.²¹

Several strategies addressed the trustworthiness of the findings. An audit trail was maintained.²⁰ The primary investigator participated in a preliminary peer debrief throughout the coding process. In addition, interviewees confirmed their transcript's accuracy; 1 interviewee did not respond to this request, resulting in a final verification rate of 21/22. Interviewees were also invited to participate in member checks that involved reviewing the findings to verify an appropriate representation of major ideas.^{23,24} Of the 11 interviewees from the CBL group, 9 responded (82%). All 9 interviewees affirmed the findings. From the SP group, 8 of the 11 interviewees participated in member checks (73%). All 8 interviewees verified the theme descriptions.

To ensure rigor and thoroughness, we used the consolidated criteria for reporting qualitative research checklist.²⁵ For enhanced data triangulation, the SP was also interviewed (Figure 2). Coding this interview produced comparable results (eg, observed participants' improved confidence and commented on the role of debriefing in empowering them for future interactions) to the data analyzed from the participants.

Table 2. Participant Demographics: Case-Based Learning Activity

Pseudonym	NATA District	Age	Gender	Semesters Completed ^a	Undergraduate Degree
Caleb	11	24	Man	2/6	Health science, emphasis in athletic training
Kate	11	23	Woman	2/6	Exercise and sport science
Felix	11	23	Man	2/6	Health promotion and wellness
Cassidy	11	23	Woman	2/6	Preathletic training
Arianna	4	23	Woman	2/6	Strength and conditioning
Jose	11	24	Man	2/6	Health and human performance with an emphasis in exercise science
Ashley	8	25	Woman	5/6	Kinesiology: movement studies
Desiree	8	23	Woman	5/6	Exercise and sport science
Beth	8	24	Woman	5/6	Athletic performance and exercise science
Hailey	4	24	Woman	4/6	Clinical exercise science
Cathy	4	22	Woman	3/5	Exercise science

Abbreviation: NATA, National Athletic Trainers' Association.

^a Summer and interim sessions were included by some participants.

After the analysis, an athletic training qualitative researcher served as a peer debriefer who reviewed the audit trail and a summary of the findings.^{23,24} Based on their feedback, 2 higher order themes were consolidated and themes were organized into overarching dimensions.

RESULTS

The study's findings were characterized by 3 overarching dimensions: knowledge of mental health conditions, skills related to mental health recognition and referral, and perceptions of pedagogical strategies. Within these dimensions, 5 higher order themes emerged, as follows: (1) perceived value of MHFA training, (2) capability, (3) comfort and confidence, (4) engaged learning and facilitated feedback, and (5) authenticity. Figure 3 displays the relationship between the dimensions, higher order themes, and lower order themes. Each dimension and theme is presented below with supporting quotes.

Knowledge of Mental Health Challenges

Participants highlighted the knowledge they gained from the MHFA training, SP encounter, and CBL activity. In addition to describing the differences between the intervention strategies, participants emphasized their experience with the MHFA training.

Figure 2. Unstructured interview guide for the standardized patient.

Consider your experience being the standardized patient in this study.

- Reflection of overall experience.
 - What stood out to you?
 - What did you notice?
- What's your perception of how the experience influenced the students?
- How did this compare with other telehealth encounters you've had?

Perceived Value of MHFA Training. The MHFA training provided basic knowledge and practice for identifying warning signs and symptoms of mental health challenges. Regardless of secondary intervention, participants credited the training with improving their foundational understanding. Tom mentioned that “the concepts came from obviously the training.” Desiree commented on what she gained from the MHFA training, “I keep saying signs and symptoms but that’s [really] important to me. Or just differentiating between what’s a crisis and what’s not a crisis.”

Several participants referenced the ALGEE model²⁶ as a tool for engaging in conversations with individuals experiencing mental health challenges. Felix mentioned “the ALGEE model that I could refer back to, that’s just something that. . .you can have in the back [of] your mind.” Sara echoed this sentiment with “it gave a very step by step guide of. . .what are the things you need to do in this situation.”

Increased Awareness and Recognition. Participants found that their expanded knowledge of mental health challenges and awareness of signs and symptoms also improved their ability

to recognize when a patient is struggling and how to assist. Ashley commented that the training “enhanced my knowledge of recognizing signs and symptoms and being able to make that call.” Shawn echoed this sentiment and homed in on early intervention, “So, I think, for me, the biggest takeaway was early signs and symptoms, so you can perhaps nip it in the bud before it becomes a bigger issue.”

Peter highlighted the referral process, “It’s knowing when and knowing that we have referrals and people to help us. . .to ultimately focus on the health and well-being of that athlete.” Natalia commented that “I know better what to look out for and then just the fact that—it’s always better to approach a person, rather than sitting back and watching them.”

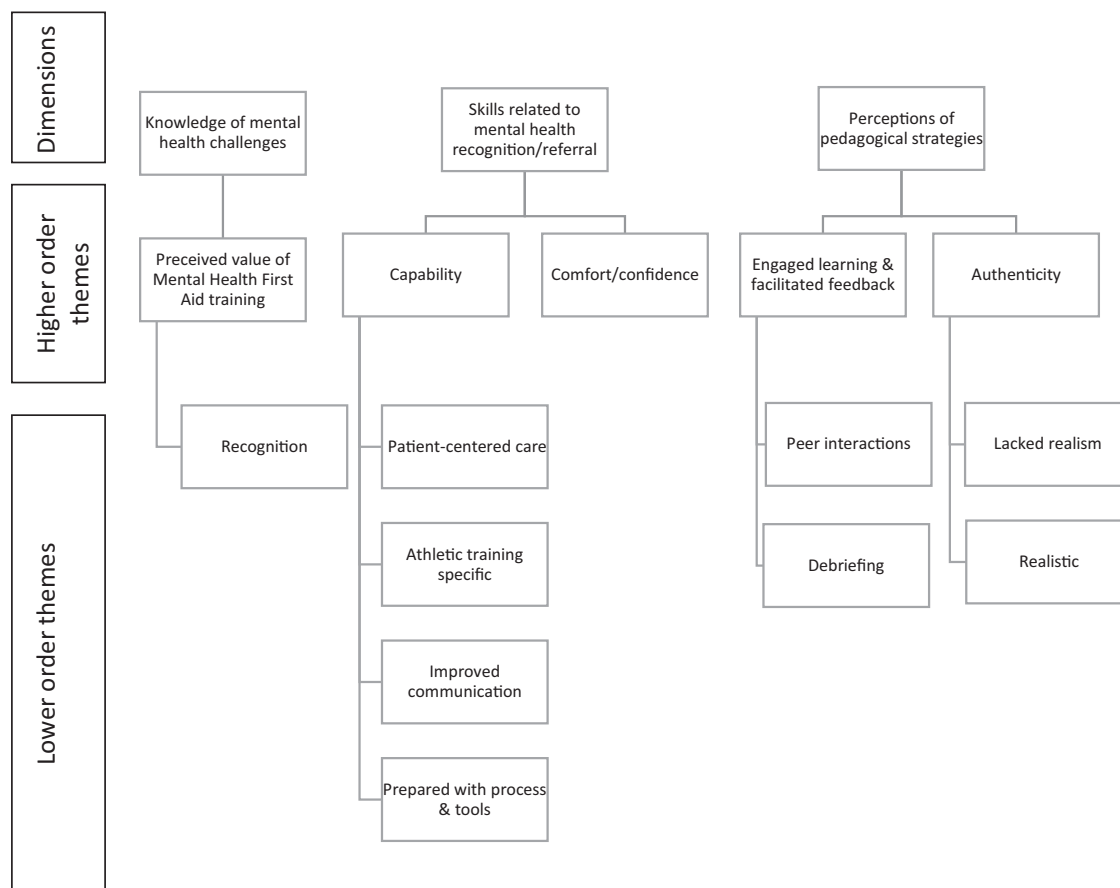
Participants acknowledged a previous lack of experience in learning about or caring for patients with mental health challenges. Therefore, they found the opportunity to enhance knowledge and skills in this area to be beneficial.

Skills Related to Mental Health Recognition and Referral

Participants described how the MHFA training and simulations (CBL or SP) improved their skills in mental health recognition and referral. Within this dimension, participants identified an external skill of competence in their abilities that we termed capability as well as the development of internal feelings of comfort and confidence.

Capability. Participants in both the SP and CBL groups described enhanced capability in recognizing and referring

Figure 3. Theme overview.



patients with mental health conditions. Four lower order themes represented the factors influencing capability, including (1) a focus on patient-centered care, (2) athletic training-specific application, (3) improved communication skills, and (4) being prepared with process and tools.

Focus on Patient-Centered Care. Several participants commented on how this experience will influence their view of patients. Beth asserted that the experience “will help me be able to look at a patient as more than just what they might be struggling with.” Dave expanded this beyond patients, “we’re finally starting to recognize the mental health side of athletes and just people as a whole.” Ashley described the opportunity to serve as a patient’s advocate:

The main benefit was that I feel I’m a better or I will be a better clinician from here on out. . . I will be the advocate for this athlete and probably [be] the first line of defense that they experience. . . I know now that I can react accordingly and ensure that they get the help that they need.

Athletic Training-Specific Application. Participants described how the opportunity to practice with an athletic training situation benefited them. Jose, a participant in the CBL intervention, mentioned, “I could definitely see myself in that scenario having that conversation, having that tough conversation with that athlete or that patient.” Tom noted that the SP encounter helped him apply the MHFA training to an AT’s role, “The patient encounter at the end was really nice, because it. . . made you put the lens of being a decent human being to being a good athletic trainer.”

Participants also distinguished what they gleaned from the training as compared to the simulated scenarios. Shawn commented, “I think I got a lot from the trainings and then the actual encounter was. . . where I was able to put things together.” Micah summarized it well, “But it’s like you have the theory, which is the training. And then you have the practical exam, which was Jackie [the SP]. I think both opportunities were helpful to us to know which things we have to improve.”

Because MHFA training is a general, public education program, providing participants with a supplementary opportunity to interact with a clinical scenario seemed to allow for the translation of their knowledge and skills to an AT’s role. Ann described how “after the interaction with Jackie [the SP], I just realized that I can use the information to the career situation, like can convert it.”

Improved Communication Skills. Participants acknowledged that the training and simulated experiences reinforced key elements of communication. Peter focused on how practicing with the SP helped him improve his conversation skills, “Everything sounds good in your head, but then when you are trying to get it out and say, it’s like finding the best way to say or finding the best flow kind of to, to make it make sense for other people.” Micah elaborated on this, “. . . [T]he interaction with Jackie helped me to see which things I have to improve. . . When you talk about mental health issues, we need to talk naturally, because the patient might be apprehensive to open up if they feel that they have been interviewed.” Likewise, Arianna said, “so talking about it, to be able to be better about asking those questions, I think was really good. I feel like we wouldn’t have had that experience if we didn’t have the case [based] learning [activity].”

Participants highlighted the effect of creating an open environment for conversation and using active listening skills. Felix stated, “just being more open and allowing a space and an environment which allows those kind of questions to come up. . . not necessarily prodding but just asking questions to gauge how they are doing mentally or emotionally.” Jose described the role of nonverbal signals, “I now try to get eye level with them. . . those little nonverbal things, making you maintain eye contact, presenting yourself in. . . a relaxed posture, that’s really important.” Dave mentioned the effect of the clinician’s internal approach and his focus on “being in the moment, listening to what they’re saying, and then formulating the response after you’ve gotten all the information from them.”

Prepared with Process and Tools. In describing their feelings of capability, many participants commented on how the step-by-step approach of ALGEE helped them feel prepared with strategies and how it was a starting point to apply with future patients. Jayden mentioned the benefit of having guidelines, “it just has given me a better plan, I guess, to approach the situation.” Kate also described how having a general approach is reassuring, “You’re not going to always say the right things maybe, but knowing the gist of this is where we need to go, and this is how I can help in that way.”

Participants identified different aspects of the training and simulation that increased their readiness to apply the knowledge and skills. Caleb mentioned that “doing the role-playing exercise really made me feel like I knew how to talk through like that whole situation.” Hailey emphasized how she saw how the real-time practice benefitted her readiness:

So I can sit here and type a perfectly executed response to something, but me actually being able to do it has helped me a lot. . . I have that base and know for my patients what to look for obviously, like all the signs. But how I’m going to approach them and how what I say and do will affect them.

Comfort and Confidence. In addition to describing improved ability, participants noted that practicing via the simulated scenarios increased their comfort and confidence in handling clinical situations involving mental health challenges. Cassidy conveyed that her confidence is “. . . more than before, I don’t know if I’m 100% confident, but maybe 80, you know, more than 50.” Similarly, when asked about what the experience has done to his confidence in mental health recognition and referral, Christopher responded with 2 thumbs pointing up and stated, “All the way up. Pretty big boost, I would say. Absolutely. I feel good, I felt good then, I feel great now.” Beth recognized a distinct change:

I would say night and day difference. Because at the beginning, when we filled out those surveys, I was like I have no idea what any of this stuff means. . . but when we took the survey again at the very end, I felt way more confident.

Some participants described improvements in initiating a conversation with a patient experiencing a mental health challenge. Cathy provided some context for this sentiment:

I think it really helped my comfort. . . Before I was okay, that’s not good, but now I would be able to sit down with them and actually talk about it. Or even start the conversation if I notice little things that are off. Before I was a little scared to even say

anything...Whereas now, I would be more comfortable with saying "Hey is everything okay or are you doing all right? What's going on?"

Other participants noticed improved comfort in directly asking about suicide or self-harm. Ashley described her personal evolution:

I guess prior to this course, I was not comfortable with the idea of asking direct questions like "Are you thinking about killing yourself?" and "Have you made any plans? Have you acted on those plans?" I didn't know what to do in that case. And I danced around the subject, rather than being really direct about it.

Overall, participants felt their comfort and confidence improved due to the MHFA training and simulated scenarios. Natalia articulated this well when she said, "Okay, I can actually do this. I'm not [a] deer in the headlights." Shawn shared a similar takeaway from this experience, "I think that my confidence in that [recognizing and referring a patient with a mental health challenge] is way up...every time I have a patient encounter, when I start my new job, even if I'm not specifically asking about mental health...I'm going to still kind of assess the situation."

Although it can be challenging to quantify confidence and comfort, participants noticed a change in these personal qualities or internal skills after their experience with the MHFA training and follow-up simulations.

Perceptions of Pedagogical Strategies

Participants explored the effect of the educational interventions. The CBL activity and SP encounter acted as parallel ways for small groups of students to engage with a particular patient case. Participants identified the interactive nature of the simulations, opportunities for feedback from peers and facilitators, and elements of authenticity as key benefits of the CBL and SP activities.

Engaged Learning and Facilitated Feedback. The CBL and SP encounters involved active learning and group interaction as well as debriefing facilitated by the primary investigator (ASA). The debriefing experience provided participants with the opportunity to receive feedback on the process and their performance as well hear their peers' perspectives.

Peer Interactions. Participants expressed that experiencing the simulations in a group provided the opportunity to learn from their peers' approaches and reflections on the process. Jayden acknowledged that "seeing how my fellow cohorts kind of approach the situation and the questions they asked just helped tremendously." Sophia stated that her peers asked "questions that I wasn't thinking of or they found different ways to ask the questions that I was asking, that just came across better."

Participants also noted how their peers modeled specific aspects of the interaction well. Beth focused on her observation of non-verbal communication, "Just seeing how everyone would react and how they would go about the conversation. Especially tone of voice, I feel like that, hearing how other people's tone of voice changed throughout the case also stuck with me." Ann acknowledged that despite her more passive role in the experience, she benefitted from the encounter by observing her peers, "I wasn't ask[ing] a lot of question but I saw my cohort friends asking

about the questions. It was very specific and also about their non-verbal or verbal expressions. I learned a lot."

Debriefing. Participants noted that the opportunity for real-time feedback was beneficial and appreciated the opportunity to debrief as part of the simulated encounters. Natalia remarked, "I thought it [the debrief] was great because I knew we had missed things...it was really helpful to know where we should have prodded a little more." Dave commented on how the ability to get the SP's perspective also added to the experience:

I also liked that I was able to ask her [the SP] some questions as well. Just being like 'hey like from your side of things like—"What did we do that was good? What can we improve on?"—getting a critique from the standardized patient as well. Just because they were the ones you know experiencing it, so that was beneficial.

Sophia focused on how the opportunity to readjust one's own approach added to the feedback they gleaned from the experience. She shared that because it was a simulation "if I made a mistake, I could backtrack or I could ask something at a different point in time and then she [the SP] gave us feedback too on parts that we missed. So, it made me look at it as a whole." Jose had a similar experience with the CBL encounter. He described:

So you can be in the middle of the scenario like we were and pause for 5 minutes, say "Okay, in this situation should I ask something different?"...Or if you're the patient, you can be like "Okay, well, you should have asked about this..." So I think it's important because it gives you a different perspective on...mental health from a patient perspective as well.

Authenticity. Although participants acknowledged they would not expect a simulation to completely mimic clinical practice, they did express that the SP encounter or CBL activity provided an opportunity to practice skills and apply their content knowledge. For example, Hailey mentioned that "you can't really emulate the environment, it doesn't feel private obviously. So that part's hard, but...it's a lessened stakes version [and] that helped." Participants identified specific elements that lacked or promoted realism.

Lacked Realism. Participants felt that the group nature of the encounter diminished the realism. Desiree commented that was "not as realistic thing is if you're doing this with a patient, like most often that patient has a comfort level with one of you, and not all 4." Dave's perspective was that "with there being multiple people, there was always that hesitancy, because you're like, am I still talking? Or someone else want to say something?"

Another limitation of simulated experiences is that they are scripted. Some participants focused on the challenge of fully immersing oneself into a scenario that they knew was not bona fide and for which they had the ability to prepare a bit in advance. Cassidy mentioned "I don't know if it felt realistic. It felt really staged." Shawn noted that:

When I have an SP case, I'm able to prepare for it a little bit...look over my notes before the SP case for that versus in the real world, I just won't have that luxury necessarily. They might just walk in Tuesday afternoon and I need to help them.

Realistic. Participants from both the SP and CBL interventions stated that the patient's situation was consistent with what

they would find clinically. Natalia found the patient's presentation relatable, "I think in her [the SP's] answers—definitely realistic, because I think that's, like I wouldn't be surprised if someone had the same challenges." Christopher summarized this sentiment well, "The patient that came in... how they were talking, their mood, their tone, the symptoms and signs, signs and symptoms that they were showing everything along those lines, their story made it pretty real."

Although some did not enjoy using Zoom as the medium, many acknowledged that it resembled a telehealth consult rather well. Dave's feedback reflects this:

Now it's a really realistic thing of people doing Telehealth. I think in-person would be way better... I'd rather be face to face with somebody. But yeah, given what the world is as a whole, it's like you need to be comfortable in these things... this could be the norm now.

Sophia agreed that virtual encounters feel applicable in our current context and described how videoconferencing can work well for mental health consults, "I feel like in terms of mental health situations like this, video/telehealth works really well. And it's convenient because, like her situation, she was like home on Christmas break."

Participants drew on both their personal and clinical experiences with telehealth in reflecting on the authenticity of the virtual simulations. Kate described her own experiences:

Everything that I've kind of done like mental health wise or like my sessions with the school or therapy, everything's been zoom. So, I've never even been in person with those people I've gotten help from... I think it was realistic now... this is how we communicate a lot now.

Tom made the connection of telehealth within athletic training, "At some of my clinical sites, when the athletes go on break, the preceptor will zoom in to talk about the new rehab exercises they want them to do. So I think that the telehealth or zoom scenario was pretty realistic." Based on Shawn's previous experiences at a clinical site, he felt that Zoom SP encounter felt authentic, "I've actually been able to do telemed, like real, I guess you could say, and it felt honestly pretty similar... The only difference is like when I did telemed through like a hospital system, we were using like a HIPAA secured line versus Zoom."

Participants found the simulations to be good practice. Shawn highlighted the interaction with an unknown patient, "I think one of the things that made it feel maybe a little more realistic is the fact that the patient, I'd never met the patient before. So, even though she was acting... that made it a little more real." Caleb shared that the "role playing was good, too, I enjoyed that a lot. And it just put it in perspective if that makes sense, like it kind of felt real." Another element of the CBL activity that seems to add to its realism was the interrupted format. Hailey commented:

I think not really knowing the full story was good, because normally I won't. And I think me feeling a little nervous when I'm talking was pretty realistic, because I know I will. And knowing I'm probably going to stutter and do all that stuff but I'm still getting across what I need to get across is relieving. So I

think it's pretty realistic to bring the feeling of that situation on and what needs to go through my head was realistic.

When asked how realistic the experience was, Micah responded, "from zero to 10, I would rate it like a 6." This rating seems to appropriately summarize the diversity of opinions regarding the experience's authenticity.

Integration of Quantitative and Qualitative Results

Phase I of this study, presented in part I,¹⁹ revealed significant improvement in knowledge and confidence related to managing mental health challenges after the MHFA training, but no difference was found in the knowledge and confidence level between any of the groups (ie, MHFA training only [control], MHFA+SP, or MHFA+CBL). That is, the control, SP, and CBL groups had similarly improved knowledge and confidence. Participants reported in phase II of the study that the opportunity to apply the knowledge and skills gained from the MHFA training to an athletic training-specific scenario via the SP or CBL increased their feelings of capability and confidence in mental health recognition and referral, helped them focus on patient centered care, and improved their communication skills. Furthermore, phase II of this study showed that athletic training students see the benefit of incorporating MHFA training into programs' curricula and appreciated the opportunity for discipline-specific practice afforded by the CBL activity or SP encounter.

DISCUSSION

As part of a larger, mixed methods study, this qualitative phase sought to examine participants' perceptions of MHFA training as well as their experiences with subsequent simulation activities, specifically an SP encounter and CBL activity. Below, we discuss the findings in light of the literature, focusing on participants' perceptions of their knowledge and skills, their experience with pedagogical interventions, and the implications for athletic training education.

Knowledge and Skills

Although our results presented knowledge and skills as separate dimensions, we discuss them together to mirror the focus of literature in which researchers examined pedagogical strategies. The nuances of the MHFA training are presented followed by key improvements described by our participants.

MHFA Training. Although this exploration focused on the CBL and SP activities, participants also had the opportunity to share perceptions about the MHFA training. Other qualitative studies involving MHFA training found similar reports of improved capability and confidence. An early exploration in Australia found that MHFA participants reported improved empathy and confidence in their interactions with individuals experiencing mental health challenges.²⁷ A study from Hong Kong with nursing students reported enhanced techniques and skills and a heightened sense of achievement and satisfaction.²⁸ Likewise, our participants mentioned an improved recognition of mental health challenges, specifically noted improved communication skills, and described feelings of preparedness.

Improved Communication. The perceived improvement of communication skills by students in the current study is noteworthy. Carr et al²⁹ presented that opportunities for students to

communicate need to be woven into curricula to enhance communication with a variety of stakeholders. The use of simulated experiences after robust training offers the opportunity for students to practice communication within a safe environment and receive feedback to improve this skill.

Enhanced Preparedness. Our results showed qualitatively improved participant capability and confidence after an engaging learning experience accompanied by feedback that parallels a previous study with SP and CBL that revealed that both simulation strategies improved clinical confidence and participants' reflection-on-action in terms of lower extremity orthopaedic skills.³⁰ Researchers of that study also identified peer-assisted learning within the SP encounter and organization of one's own thoughts through the individual CBL activity.³⁰ Because our study involved groups for both simulated encounters, engaged learning and facilitated feedback emerged as themes from both CBL and SP participants.

Perceptions of Simulation Strategies

Standardized Patients. Allied health students have described SP encounters as a beneficial bridge between content knowledge and clinical practice and a way to boost their confidence.³¹ Previous researchers from physical therapy education indicated that students found SPs valuable, the encounters felt more real than role play, and the associated feedback enhanced their learning.³² Athletic training students have indicated that SP interactions allow them to transfer learned skills into clinical application resulting in noticeable improvement in both clinical and soft skills.³³ In our study, SP participants described how interacting with an individual they did not know allowed them to practice communication and ultimately improved their feelings of confidence and capability.

In a previous investigation, researchers followed up with students 1.5–3 years after a mental health emergency SP encounter and reported that the long-term positive effects on their clinical practice included improved empathy, active listening, and emergency planning.¹⁸ Although our study interviewed participants shortly after their SP encounters, they reported similar gains in active listening and preparedness for handling mental health concerns, including crisis situations.

Case-Based Learning. CBL has also been credited with linking learning to practice and has been reported to positively affect students through engagement with content, improved understanding, and opportunities to problem solve, among others.³⁴ Student perceptions of virtual CBL activities have included flexibility and efficiency.³⁵ Our results show that participants engaging in CBL found that the interrupted format provided realism, whereas role playing afforded both practice and feedback that they could integrate into future clinical practice.

Athletic Training-Specific Application. The combination of MHFA training with a supplementary simulation has shown promise in athletic training education. Ostrowski et al¹⁰ incorporated MHFA training and an SP encounter into their curriculum. After the MHFA training, students reported increased competence and confidence in providing care for individuals with mental health concerns and found the SPs beneficial for providing an authentic practice opportunity.¹⁰ Our results support these findings as participants discussed how the opportunity to practice with an authentic case in an engaging way, either

SP or CBL, improved their perceived capability, comfort, and confidence. The parallels are particularly valuable given that the study by Ostrowski et al¹⁰ involved face-to-face interactions, whereas we incorporated virtual strategies. The ability to use these techniques in multiple formats with similar results helps provide educators with more flexibility in their delivery.

In addition, although our part I¹⁹ results did not show a significant difference between the allocation groups in terms of assessed knowledge and confidence, participants reported that simulation with SP or CBL enhanced their readiness for clinical practice over the MHFA training alone. The additive effect of applying MHFA knowledge and skills to an athletic training specific scenario helped students see the relevance to their role as an AT.

Implications for Athletic Training Education

Because both the SP encounter and CBL activity were well received by participants, educators should consider their own goals, resources, and limitations when making curricular decisions. Benefits of SPs include a safe environment to practice decision-making, engage in interpersonal communication, and enhance confidence, whereas obtaining the necessary time, fiscal, and personnel resources can make implementation challenging.³⁶ The use of CBL has also been advocated as a safe experimentation in clinical decision-making that requires effort in development and facilitation.³⁷

In this exploration, the SP encounters involved recruiting and training an SP, a 15- to 30-minute interaction with each student group, and seemed to work best with pairs. The CBL activity had less preparation investment as only the facilitator needed to become familiar with the case, but the student interactions (groups of 3–4) took about 45 minutes (see Table 3 for more details). However, notably, this summary does not include the process for developing the encounters.

Several alternative scaffolding suggestions were discussed during the participant interviews. One option would be an initial group CBL activity followed by a formative SP encounter in pairs and then an individual, perhaps evaluative, SP encounter. Participants from the CBL group commented on how the embedded brainstorming and opportunity to role play with their peers felt like good practice. SP participants seemed to appreciate having their peers to support them during this initial interaction but mentioned that it decreased the realism. Another suggestion was to increase the difficulty of the patient's presentation, namely, to start with a case with early signs and symptoms and then progress to having to deal with a crisis.

Limitations and Future Research

Although an effort was made to standardize the process by using MHFA and parallel CBL and SP encounters reviewed by peers, full control of participants' previous and concurrent clinical experiences and exposure to mental health challenges and the studied pedagogical techniques was infeasible.

Because this study was conducted virtually, it would be interesting to compare the perceptions of MHFA and mental health SP/CBLs conducted in person. This information would blend our work with that of Ostrowski et al.¹⁰ This comparison could also help athletic training educators determine how best to incorporate mental and behavioral health delivery into their courses.

Table 3. Comparison of Simulated Learning Strategies

	Standardized Patient (SP) Encounter	Case-Based Learning Activity
Time	15–25 minutes	~45 minutes
Group size	2–4 people, pairs seemed to work best	2–5 people, 3–4 people seemed to work best
Feedback	At conclusion (reflect on overall encounter)	Throughout case examination (group brainstorm, role play, and then debriefing for each section)
Group dynamic	Decreased realism; decreased pressure as an individual—peers could jump in with ideas	Able to learn from different perspectives; comfortable role playing with classmates
Effect of Zoom	Lost some of the patient’s nonverbals (consistent with telehealth interactions)	Students may prefer in-person interaction, but medium did not seem to influence effectiveness of the intervention
Preparation needed	Training the SP (took about an hour)	Facilitator needs to read over the case (15 minutes)

This study had students in small groups for SP and CBL activities, so future researchers could compare an individual SP encounter, pair SP encounter, and small group CBL activity to determine how the group dynamic influences the experience. This comparison may help educators appropriately scaffold learning experiences.

The use of MHFA as a continuing education offering for ATs is gaining popularity. Therefore, exploring ATs’ perceptions of MHFA training and various simulated experiences could help continuing education providers develop meaningful educational opportunities in the mental and behavioral health content area.

CONCLUSIONS

The increased prevalence of mental health concerns and the heightened emphasis on behavioral and mental health within athletic training necessitate strategies for the delivery of this content and practice of these skills. The opportunity to practice in an authentic environment via the MHFA training and simulated patient encounters improved participant comfort and capability in recognizing and referring mental health concerns. Given that students’ educational exposure and opportunities for real-time engagement with patients’ mental health concerns may be limited,³⁸ the standardized curriculum of MHFA training reinforced by simulation experiences may help close this gap. In addition, the virtual delivery method allows for convenient and flexible incorporation of mental and behavioral health content into athletic training programs and continuing education. These qualitative findings provide helpful context to the results reported in part I.¹⁹ Although part I¹⁹ did not show a statistical difference in knowledge and confidence between the control and intervention groups, the qualitative findings presented in here advocate for the incorporation of simulated learning experiences. Participants described how the opportunity to practice their skills with a simulated case (either SP or CBL) realistic to athletic training practice helped prepare them for future patient interactions. Thus, active strategies such as SPs and CBL should be used during professional education for the transference of knowledge into clinical practice.

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