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Confirming the Factors of Professional Readiness in Athletic Training

Cover Page Footnote

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Confirming the Factors of Professional Readiness in Athletic Training

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Background: Healthcare professionals such as athletic trainers must be prepared for autonomous practice immediately after graduation. Although certified, new athletic trainers have been shown to have clinical areas of strength and weakness. To better assess professional readiness and improve the preparedness of new athletic trainers, the factors of athletic training professional readiness must be defined. However, limited research exists defining the holistic aspects of professional readiness needed for athletic trainers. Confirming the factors of professional readiness in athletic training could enhance the professional preparation of athletic trainers and result in more highly prepared new professionals. Therefore, the objective of this study was to further explore and confirm the factors of professional readiness in athletic training. **Methods:** We used a qualitative design based in grounded theory. Participants included athletic trainers with greater than 24 months of experience from a variety of work settings from each district of the National Athletic Trainer's Association. Participants took the demographic questionnaire electronically using Qualtrics Survey Software (Prove UT). After completing the demographic questionnaire, we selected 20 participants to complete one-on-one interviews using GoToMeeting audiovisual web conferencing software. IBM Statistical Package for the Social Sciences (SPSS, v. 21.0) was used to calculate descriptive statistics for participant demographics. The researcher transcribed all interviews verbatim and utilized a grounded theory approach during qualitative data analysis. Data were analyzed using a constant comparative analysis as well as open and axial coding. We established trustworthiness by using reflexivity, member checks, and peer reviews. **Results:** Analysis revealed four overarching themes including management, interpersonal relations, clinical decision-making, and confidence. **Conclusion:** Athletic trainers should be well-rounded. They must possess communication and organizational skills, the ability to collaborate, value self-reflection and continuing education, and have clinical expertise. Future research should be conducted to finalize a comprehensive model of professional readiness for athletic training, to develop a holistic assessment instrument for athletic training professional readiness, and to explore the preparedness of new athletic trainers as athletic training education transitions to the professional masters degree. **Key Words:** *autonomous practice, newly certified athletic trainer, transition to practice skills*

Athletic trainers must be ready for autonomous practice immediately after certification due to their responsibilities as healthcare professionals.¹⁻³ Professional readiness has been defined as a state of being where the individual has foundational knowledge, job specific capabilities, provides safe patient care, and has a balance of knowing, thinking, and doing.⁴ Athletic trainers are currently assessed in five domains including injury and illness prevention and wellness promotion; examination, assessment and diagnosis; immediate and emergency care; therapeutic

intervention; and healthcare administration and professional responsibility.⁵ Additionally, attributes such as communication and organizational skills, confidence, reflection, and stress management have shown to be beneficial for professional practice.^{1,6-9} However, new professionals have clinical areas of strength and weakness and often struggle with poor work-life balance and burnout.^{1, 7-17}

Limited research exists defining the holistic aspects of professional readiness needed for athletic trainers. Szlosek et al. studied newly

certified athletic trainers and their supervisors to identify factors of professional readiness for athletic training.⁹ Szlosek et al. identified four overarching components of professional readiness including organization and administration, interpersonal relations, athletic training attributes, and confidence.⁹ However, further research is needed to confirm the factors of professional readiness and utilize them to assess professional readiness for the general population of athletic trainers.⁹ Confirming the factors of professional readiness in athletic training could enhance the professional preparation of athletic trainers and result in more highly prepared new professionals. Therefore, the aim of our study was to further explore and confirm the factors of professional readiness in athletic training.

METHODS

We utilized a qualitative method design based in grounded theory. Qualitative data was used to explore the perceptions of certified athletic trainers regarding the aspects of professional readiness in athletic training. By interviewing the general athletic training population and not solely newly certified athletic trainers and their supervisors, as was described in previous research, the results can be compared for consistency and are more generalizable for the entire professional body. When using a grounded theory approach, the researcher is the primary instrument of data collection.¹⁸ Data analysis can result in substantive theory, where the researcher identifies a core category that is connected to all other categories. When a substantive theory results from data analysis, the research can be considered grounded theory.¹⁸⁻²⁰ The aim of this research project was to develop grounded theory by further exploring and confirming the factors of professional readiness in athletic training.

Participants

We selected participants using a purposeful, nonrandom sampling method. We included Participants ($n=20$) if they were athletic

trainers with greater than 24 months of experience (Table 1). We excluded participants if they were not actively working as an athletic trainer or if they had less than 24 months of experience. We selected participants from a variety of work settings including collegiate, secondary school, and emerging settings. Emerging settings were operationally defined as any work setting other than collegiate or secondary schools requiring athletic trainers to use trained clinical skills taught in the athletic training curriculum (E.g. clinics, performing arts, military).

Subject	Gender	Age	Setting
Abby	F	27	NCAA DI
Bob	M	44	NCAA DI
Kristin	F	25	NCAA DI
Laura	F	26	NCAA DII
Mark	M	28	NCAA DII
Shana	F	37	NCAA DII
Doug	M	47	NCAA DIII
Emma	F	26	NCAA DIII
Paula	F	53	NCAA DIII
Arthur	M	37	Secondary School
Bill	M	39	Secondary School
Erin	F	24	Secondary School
Jacob	M	32	Secondary School
Julie	F	38	Secondary School
Sam	M	50	Secondary School
Anne	F	35	Emerging-Orthopedic Office
Beth	F	28	Emerging- Military
Jaimie	F	25	Emerging-Clinical Outreach
James	M	46	Emerging-Industrial
Lana	F	43	Emerging-Industrial

Table 1. Participant Demographic Data

Data Collection and Analysis

IRB approval was obtained from the first author's institution prior to the onset of the study. We recruited 250 certified athletic trainers from each of the 10 districts of the National Athletic Trainers' Association (NATA) using the NATA research survey service. A total of 180 participants completed the informed consent and demographics questionnaire. From that group, we selected

20 participants based on work setting to participate in one-on-one interviews.

We developed the demographic questionnaire using a multistage process including: (1) a review of the literature and (2) review by a panel of three experts on the research team.¹⁸⁻²¹ Each member of the research team is an experienced qualitative researcher. Three members are content experts in the field of athletic training and one individual is an expert in survey development and research methodology. Information contained in the questionnaire included participant gender, age, work setting, the year they became certified, and the length of time they have been employed as an athletic trainer. Participants completed the demographic questionnaire along with the informed consent form electronically using Qualtrics Survey Software (Provo, UT) in a location and time convenient for the participants.

We also developed the semi-structured interview guide (Table 2) using a multistage process including: (1) a review of the literature, (2) review by the same panel of three experts for content, bias, and clarity, and (3) pilot testing of two certified athletic trainers.¹⁸⁻²¹ One-on-one interviews were conducted using GoToMeeting web conferencing software and were audio and visually recorded to accurately preserve information from both verbal and nonverbal forms of communication.¹⁸⁻²⁰ The first author conducted all interviews to ensure consistency with data collection. Interviews

lasted approximately 30 minutes and were conducted until data saturation was achieved and no new data or themes emerged.¹⁸⁻²⁰ Interviews were transcribed verbatim and sent to the participants for member-checking.¹⁸⁻²⁰ All participants reviewed their respective interview transcriptions and returned them without any edits. Additionally, we assigned all interview participants pseudonyms to ensure confidentiality.

1. What does professional readiness mean to you?
2. Can you discuss any attributes or personal characteristics that make an athletic trainer professionally ready?
3. What are the expectations of you as an athletic trainer?
4. Can you discuss any expectations that are uniquely specific to your current job?
5. How have you evolved as an athletic trainer over your years of practice?
6. Can you describe the level of supervision or support you have while you are practicing as a certified athletic trainer?
7. Based on your experiences, are newly certified athletic trainers fully ready to practice independently?

Table 2. Semi-Structured Interview Guide

We calculated descriptive statistics using IBM Statistical Package for the Social Sciences (SPSS, v. 21.0). We inductively analyzed the interviews to find emerging themes and patterns within the data. The first author reviewed each transcript and consulted the research team to create themes. We utilized the constant comparative method of data analysis to code data throughout the collection period. The constant comparative method requires the researcher to compare one segment of data with another to determine similarities and differences. The data is then grouped based on similar dimensions, given names, and becomes categories.^{18,19} Additionally, we used a combination of open and axial coding to create themes. We used open coding to generate initial categories and axial coding to organize data and group open codes.¹⁸⁻²⁰ We established trustworthiness of the research using reflexivity, member checks, and peer reviews. Reflexivity was established through critical reflection of biases, worldview, experiences, and assumptions. Self-reflection of the primary investigator took place prior to data collection and allowed him to investigate his own perspectives of professional readiness, and to separate his own opinions when interpreting the results of the study. Member checking was incorporated by confirming the content and meaning of the interview responses through participant reviews of transcripts. Peer debriefing was performed by having a content expert review the data and ensure the conclusion was plausible.¹⁸⁻²⁰

RESULTS

Upon analysis, four main themes emerged for professional readiness in athletic training including management, interpersonal relations, clinical decision-making, and confidence (Figure 1). Subthemes for each theme are discussed within the sections below.

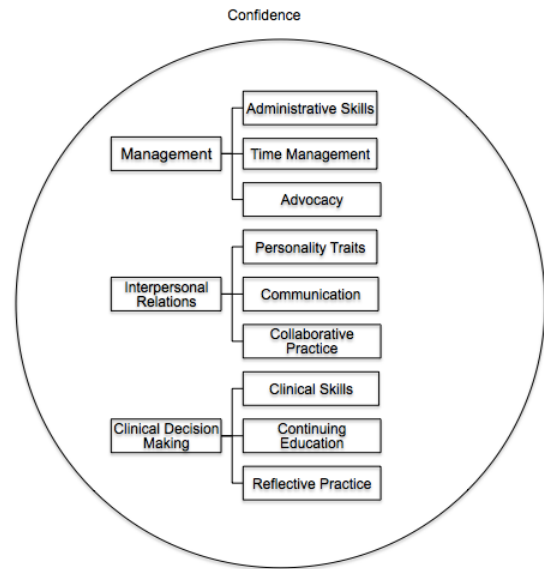


Figure 1. Diagram of the factors of professional readiness in athletic training.

Theme 1: Management

Aspects of management were mentioned by 18 participants. Management was categorized as athletic training services not involving direct patient care. Management was divided into three subthemes including administration skills, advocacy, and time management.

Administrative Skills

Participants discussed the administrative responsibilities performed by athletic trainers. Paula said, "People need to have a good administrative background. They need to understand how to keep track of paperwork, collect and analyze data." Participants described the importance of a variety of administrative duties including documentation, budgets, supply ordering, insurance billing, and developing policies and procedures. Regarding documentation, Alison described how she writes a comprehensive SOAP note: "The biggest thing is telling a story, and telling it as completely as possible." Mark said "It's important you're all documenting the same way because if I'm out and someone sees a patient of mine and it's not noted the right way, it can make things difficult."

Additionally, participants identified challenges with administrative duties. One administrative duty participants described as challenging was insurance billing. Beth stated, "I was lost when it came to dealing with insurance." Bob said, "Most people until they've done it, don't understand it . . . Knowing your CPT codes and ICD-10 codes, that's where it's extra work." Although challenging at first, participants did state their administrative skills improved fairly quickly with experience.

Advocacy

Participants discussed the importance of advocating for their personal needs and for the profession of athletic training. Participants expressed the need to educate parents, staff, and other healthcare professionals about the athletic training profession. Paula said, "It's frustrating working for people that don't see what we do on a daily basis. It's inviting those people into our room." Bill stated, "Sometimes you're dealing with parents that may not know my education background or what my job is. So then you educate the parent." Participants explained that educating others about athletic trainers prevented role confusion and conflict when the athletic trainer provides patient care or makes important clinical decisions.

Participants also discussed the need to advocate for personal and professional needs. Jamie said, "if you don't advocate for yourself, no one's going to do it for you." Jamie also explained how she obtained a very nice athletic training room at her new job. She said, "There's no way that I can do rehab and evaluations effectively with a tiny closet. I really pushed to have this room." In addition to space, participants expressed the need to advocate for an adequate expense budget, better pay, and employment benefits.

Time Management

Participants discussed the importance of time management skills. These skills included multitasking, balancing patient care load,

managing schedule changes, and work-life balance. When discussing the attributes needed for athletic training, Sam said, "You need the ability to multitask." Participants frequently described situations where there were multiple patients needing care at the same time. When she worked in the high school setting, Lana said, "I was juggling 10 to 15 people at a time." When treating multiple patients, Erin explained the need to "prioritize each of those different needs."

Participants also discussed the importance of staying organized and being adaptable to workplace changes. When discussing organization, Arthur said, "Look at your schedule. How are you going to manage your time? Plan and coordinate." Participants also explained schedule changes happen frequently, and athletic trainers must adapt to these changes. Lana gave an example: "Last week one of our co-workers had a family emergency, so we had to adapt and cover. Make things work."

Lastly, participants discussed the importance of work-life balance and making time to take care of their own needs. Beth stated, "If we're not in our best mental and physical state, then we can't help others get to their best either." However, participants also revealed a struggle achieving work-life balance. Erin said, "I think as professionals, a lot of times we forget the job isn't everything and it's going to be there whether you're there or not." In order to more closely reach a proper work-life balance, Mark recommended hobbies. Mark explained, "I think hobbies outside of work gives you time to step away and decompress." Bill expressed the need to "work smart" and the importance of saying no. He said, "When I first came into the profession, I wasn't saying no a lot. Then I realized there's life outside of athletic training, and it's fun to do that stuff so you don't burn out." Overall, participants emphasized how easy it is to become overworked and the importance of staying refreshed in order to provide optimal patient care.

Theme 2: Interpersonal Relations

The importance of interpersonal relations was mentioned by all 20 participants. Interpersonal Relations was categorized as the ability of the athletic trainer to properly interact with others. Participants discussed the importance of verbal and nonverbal communication skills, personality characteristics such as humor and empathy, and the importance of working with other healthcare providers. Interpersonal relations was divided into three subthemes including personality traits, communication, and collaborative practice.

Personality Traits

Participants discussed various personality traits they deemed beneficial for athletic trainers including empathy, approachability, a sense of humor, dedication, maturity, and patience. Arthur discussed the need to be empathetic and understand the patient's entire circumstances to development professional relationships. Arthur said, "It's important to have empathy towards the patient and understand where they're coming from . . . I believe that helps build a trusting relationship, which improves patient care." When discussing the importance of a sense of humor, Shana noted a sense of humor "makes us more approachable." Doug explained, "You have to have humor, make sure there's some fun in it or else you're going to burn out." Overall, participants believed athletic trainers and their patients are subject to a great amount of stress. They believe empathy, patience, and the ability to utilize a sense of humor can combat the stressful environment, build patient rapport, and increase enjoyment at the workplace.

Communication

Participants saw strong communication skills as necessary for clinical practice. Participants discussed the importance of frequent communication with coaches, fellow staff members, patients, and team physicians. Mark discussed the importance of relaying information to coaches and "knowing when to

escalate information and how quickly it needs to be escalated." Mark further explained that frequent meetings, at least weekly, are beneficial to "set the expectations for your patients." When working with coaches, participants believed it is also important to establish the coach's preferred method of communication. Paula said, "some coaches like to text, some like to email, some just like to talk on the phone. So figuring out different communication styles is important."

Participants described what constitutes good communication skills, including proper body language, talking at an appropriate intellectual level, and listening. Shana noted the importance of body language and how it affects the perception of the individual speaking. She said, "Make yourself more approachable by using open posture. Lean forward and make eye contact, so you seem more attentive." Julie described how she changes her verbiage based on the person with whom she is speaking. She explained, "You have to adjust how you speak to each individual . . . I use technical terms when I'm talking with parents, but the kids don't understand that, so I make sure it's simplified."

Regarding the importance of listening, James said, "Sometimes people just need to talk and have you listen." Jamie believes listening is an important aspect of developing good patient relationships. Jamie said, "If your patients don't feel like you listen to them, I don't think they're going to trust you."

Lastly, participants noted the importance of properly managing conflict. Participants emphasized the need to deescalate the situation and not get emotional. Justin said, "I try to address the problem. Not let it grow into something bigger than it should be . . . work it out and let it be done." James values an active listening approach when managing conflict. He likes to use "phrases to help empower the person that's upset. Affirming their unhappiness." In all, participants valued a

calming approach to conflict, centered on listening and open dialogue.

Collaborative Practice

Participants discussed the importance of intraprofessional and interprofessional collaboration. They noted the value of working with other providers, developing professional relationships, and utilizing mentors. Participants believed collaboration is important for personal professional growth and providing high quality patient care.

Participants valued professional relationships with other athletic trainers and shared that collaborating is helpful when treating challenging patient cases and to provide emotional support. When talking about his fellow staff athletic trainer, Mark said, “We bounce ideas off each other all the time and lean on each other.” Participants also noted the impact athletic training mentors had on their professional growth. James said, “Everybody needs a mentor . . . mentors provide a safety net and teaching moments.” Participants attributed collaboration with their mentors to their professional development in administrative duties such as creating policies and procedures and insurance billing, as well as expanding their clinical skills and teaching them how to function in unique work settings.

Participants also valued professional relationships with different healthcare providers. Participants referenced collaboration with physicians, physical therapists, occupational therapists, nurses, chiropractors, and psychologists. Julie said, “All kinds of medical professionals bring something different to the table.” Participants stated that interprofessional collaboration improves patient care and increases patient compliance and trust. Jamie said interprofessional collaboration “helps with compliance, because patients know they are receiving the standard of care.”

Lastly, participants described how to develop professional relationships with other

healthcare providers. Participants noted the importance of communication and outlining expectations. Erin explained, “We discuss what the athlete will need, what the parents can afford, what can realistically be done. The team doctor makes his recommendation to PT, PT will let me know what they are doing, and we go back and forth so there's no misinformation.” Doug described how a team approach and frequent communication from all the healthcare staff is important. He said, “We have weekly meetings where everybody gets together - PT, strength coaches, my staff. We discuss our plan to make sure we're doing what's best.” Overall, participants stressed the importance of mentorship and a team-based approach to practice to improve patient outcomes, and develop their own professional skills.

Theme 3: Clinical Decision-Making

Clinical decision-making was categorized as the skills and attributes required by the athletic trainer when making clinical decisions related to patient care. Aspects of clinical decision-making were discussed by all 20 participants. Clinical decision-making was divided into three subthemes including clinical skills, continuing education, and reflective practice.

Clinical Skills

Participants described the need for athletic trainers to be proficient in a variety of content areas including injury prevention, emergency care, evaluation and diagnosis, and rehabilitation. Participants also explained the importance for clinicians to be efficient, work quickly, and not “freeze” when being placed in challenging situations. As Lana said, “We need to know prevention, treatment, and rehabilitation of athletic injuries, but it's also how efficient and effective you are at implementing that.” Additionally, some participants believed manual therapy techniques, inserting IVs, casting, and suturing should be better incorporated in athletic training curricula.

Participants also believed their clinical skills improved over time. Regarding evaluations, Arthur said, "I've evolved clinically by looking at the total body more than just the injury site." Julie stated, "My history skills have developed significantly . . . I've changed the questions I use. I think they're more efficient." When discussing the beginning of her career and creating rehabilitation plans, Kristen explained, "Breaking up the monotony was hard for me because I didn't have much experience." Abby also developed her rehabilitation skills over time. She said, "Generating a start to finish plan of care . . . that was a learning curve." Although participants experienced the most significant professional growth in various content areas, participants consistently expressed they could have been more skilled when their careers began.

Additionally, participants discussed background knowledge and its effect on clinical practice. Participants expressed that foundational knowledge in anatomy, kinesiology, nutrition, and pharmacology is essential when performing evaluations or designing treatment plans. Shana gave an example of how knowledge in anatomy guided her evaluation. She said, "I have an athlete with popliteal tendonitis, something I've never seen. I thought it was a hamstring injury, so understanding how muscles lay in the body is important."

Lastly, participants discussed how clinical responsibilities and patient interaction varies among work settings or patient populations. Paula discussed her experiences when working in performing arts versus sports settings: "I work with theater and in dance . . . not only performers, but musicians, carpenters, and electricians - people where health and wellness isn't their priority. Getting them to move every day, stop smoking, exercise, those are challenges compared to working with people that are active every day." Bill compared his experience working in a wealthy school

system to his current position in an underprivileged school system. He said:

"The questions I could ask at the previous school are not the same questions I can ask a student who suffered a head injury here . . . one question I might have asked at my previous school is "do you know today's date? What's 25 - 2?" If I were to ask the same thing to a kid here, I might get very random answers and that's just normal . . . we have to scale it back and say, "What was on the lunch menu?"

Overall, participants emphasized that athletic trainers need a wide variety of knowledge and skills. Participants explained that their knowledge, skills, and abilities improved over time, which is normal, but believed their skills could have been better at the onset of their careers. Participants also expressed the need of athletic trainers to adapt to unique aspects of different work settings based on the patient population.

Continuing Education

Participants discussed the importance of continuing education for athletic trainers. Continuing education was cited as influential on clinical development. Julie said, "I've been doing this for 20 years and there's still new things to learn on a daily basis." Jamie explained, "It's a big deal to stay up-to-date. There's always new things coming out . . . our field evolves a lot and we need to make sure we're doing what's best for patients." Lana described that she has learned a great deal about pain because of continuing education. She said, "That's been really helpful for how I approach chronic pain in the older population I work with." Although the subject matter varied, participants utilized continuing education to improve their clinical practice.

Reflective Practice

Participants spoke about the importance of being a reflective practitioner. Reflective practice was described as having different forms including critical thinking, self-reflection, and adaptability. Participants stated that athletic trainers must critically

think when evaluating and treating patients and that medicine is not just regurgitating information. Julie said, "You need to think all the way through a scenario, from initial evaluation, how you would re-evaluate, and what treatment plan you would create." James looks for critical thinking traits in athletic trainers he hires. He said, "There's an inventory that lists successful critical thinking characteristics. I found that's really accurate in how to predict a good athletic trainer."

Participants also discussed the importance of self-reflection. Participants expressed that it is impossible to know everything and athletic trainers must admit when they do not know something. Furthermore, they expressed that providers should not be afraid to ask questions, and should always look for ways to improve. Mark stated, "The most important thing is being able to evaluate yourself and know when you're lacking in something. Then having the wherewithal to make an improvement." James said, "I can always tell somebody that's going to be a great athletic trainer because when they're given feedback, they don't get defensive. They absorb it, process it, and then come back to ask more questions."

Lastly, participants frequently described the need for adaptability. Participants explained that athletic trainers must act appropriately no matter the circumstance. Laura stated, "We need to be adaptable and ready to do anything thrown our way." Beth said, "What do you do if you don't have all the modalities that you're used to? You've got to think of something." Abby and Kristen explained how adaptability occurs when making patient care decisions. Abby explained that athletic trainers need to "individualize care and tailor treatment plans based on who you're dealing with." Kristen said, "if something's not working, we have to quickly change our direction and start something new."

Overall, participants highly valued reflective practice. Participants discussed critical

thinking skills, self-reflection, and adaptability as important traits for proving patient care and managing complex clinical situations. Additionally, participants expressed the importance of reflective practice for professional growth and development.

Theme 4: Confidence

Confidence was discussed by 15 participants as important for athletic trainers. Although its own theme, confidence was intertwined with the other themes. Participants discussed the importance of confidence with relationships building, clinical and administrative duties, and clinical decision-making.

Participants believed confidence increases patient trust and promotes faster decision-making. Lana said, "If you don't have confidence in what you're saying, their trust and belief in what you're doing could be compromised." Jamie explained, "If you're not confident, people aren't going to listen to you." Shana did note that athletic trainers should be careful of being over-confident. She said, "Sometimes you can have a false confidence that can come off as arrogance. If you're over confident, you can miss things."

Participants also recognized that confidence grows over time. Abby said, "The first you time you do anything will be foreign. You need to be comfortable being uncomfortable." Participants believed one of the best ways to gain confidence is through experience. Jamie explained, "You have to be put in situations, and handling them correctly helps build confidence . . . I need to be put in a situation before I'm 100% confident I can handle it."

Participants highly valued confidence as a trait for athletic trainers and explained the confidence is important in all aspects of the profession from administrative skills to communication, to direct patient care. Confidence was said to build trust and improve the speed the clinical decision-making. Lastly, participants noted that confidence improves with experience and it is

common for new professionals to lack confidence in situations that have never been encountered.

DISCUSSION

Research defining professional readiness in athletic training is limited. The results of our study support previous research, and expands our understanding by identifying new aspects of professional readiness in athletic training. Content within the themes of management, interpersonal relations, clinical decision-making, and confidence is valued throughout medical research. However, the themes have not been previously vetted and conclusively defined as the overarching themes of professional readiness in athletic training.

Theme 1: Management

Participants discussed managerial skills needed to be successful in the athletic training profession and expressed challenges with some tasks, especially earlier in their careers. Healthcare administration is required curricular content by the CAATE.²² Although emphasized in the curriculum, administration is an area in which newly certified athletic trainers have felt less confident or have been deemed to struggle.^{9,10,13} Athletic training programs should try to address the trend of difficulty within the content area of healthcare administration. It may be beneficial for students to be actively engaged with administrative tasks and responsibilities early on in clinical education in addition to direct patient care.

Participants valued organizational skills such as time management, adaptability, and the ability to multitask. Organizational skills are frequently described as beneficial in the literature for many disciplines, not only healthcare, as they are deemed transferrable skills.⁶ Healthcare providers can utilize organization and time management skills to properly manage patient caseloads and increase productivity.^{15,23}

Participants also expressed the need for proper work-life balance to prevent burnout,

but acknowledged that work-life balance is difficult to achieve. Burnout is highly prevalent among medical professionals due to a stressful work environment.^{1,7,16} Low salaries, long work hours, staff shortages, and the pressure of clinical decision-making have been shown to attribute to burnout among athletic trainers.^{7,8,15,17} To combat burnout, athletic trainers should maintain a healthy lifestyle, exercise, get enough sleep, engage in leisure activities, and meet personal and family needs.^{15,24}

Lastly, participants discussed the need for personal and professional advocacy to ensure they received appropriate compensation, benefits, and other workplace needs. The need for personal advocacy is not widely discussed in the literature, but it is not surprising. A 2017 survey of collegiate athletic trainers revealed that 62% of athletic training facilities had been expanded or renovated within the past 5 years; however, on average, participants only responded neutrally when asked if their facility met the needs of the athletic training staff and patients.²⁵ Additionally, according to the US Bureau of Labor Statistics,²⁶ the median wage for athletic trainers in 2019 was \$48,440, which is much lower than other allied healthcare professionals. For example, the 2019 median annual income was \$84,950 for occupational therapists and \$89,440 for physical therapists.^{27,28} Participants also described frequent situations where they encountered people who did not understand the profession of athletic training. Limited research exists examining the public's knowledge of the athletic training profession. However, research examining high school parents revealed only 50% of parents always perceived the secondary school AT as a medical professional, 62% believed society needs athletic trainers, and 61% did not always trust the medical opinion of athletic trainers.²⁹

Theme.2: Interpersonal Relations

Participants discussed the need for athletic

trainers to develop positive professional relationships with patients and colleagues by utilizing good communication skills, a sense of humor, and empathy. Using proper communication skills and exhibiting empathy have shown to be important traits for healthcare providers.^{6,15} The CAATE also recognizes the importance of communication in providing patient centered care. The CAATE standards for the accreditation of professional athletic training programs includes communication skills within the core competency of patient centered care.²² A sense of humor has also been valued in other healthcare settings, as it has been shown to help providers manage stress and build camaraderie.^{9,30-33}

One aspect of communication discussed by participants that is less prevalent in athletic training research is conflict management. Conflict is often believed to be unavoidable as a healthcare provider, as the job entails working with other people.^{34,35} If not managed properly, conflict will have negative implications on patient care and increase the likelihood of burnout.³⁴⁻³⁷ Unfortunately, conflict resolution skills are not often emphasized in health science curricula.³⁷ Healthcare professionals only have moderate levels of confidence in their ability to resolve conflict and do not believe they had adequate training in conflict resolution.³⁷ Athletic training programs should incorporate education in conflict resolution to better prepare students for challenges they may encounter in the workplace. Communication and problem-solving skills have shown to be vital for conflict resolution, as parties must be willing to listen to each other and speak calmly and clearly. Additionally, problem-solving skills allow people to avoid defensive behavior and instead use analytical decision-making.^{34,35,37}

Participants expressed a value for collaborative practice and mentorship as important aspects for optimizing patient outcomes and personal professional

development. Collaboration is highly valued in the medical community. The CAATE requires athletic training programs teach students how to incorporate interprofessional practice into their future careers.²² Additionally, the National Academy of Medicine, formerly named the Institute of Medicine, includes work with interdisciplinary teams as a core competency for all healthcare professionals.³⁸

The benefits of mentorship in healthcare fields, including athletic training, are well documented in the literature. Mentorship has been shown to be beneficial for career development and professional socialization, promote collaborative practice, and reduce burnout.³⁹⁻⁴² Mentorship has been especially vital as athletic trainers transition to practice or change work settings. Mentors help new athletic trainers feel supported and assimilate to independent clinical practice.^{40,42} Due to the tremendous benefits mentorship provides, athletic training programs should provide professional networking opportunities for students, and employers should institute formal mentoring programs for new hires.

Theme 3: Clinical Decision Making

Participants noted the importance of providing quality patient care and discussed the clinical skills required for athletic trainers to do so. The basic clinical skills required for athletic trainers are well documented, and the CAATE has 17 curricular content standards within the areas of clinical examination diagnosis, and intervention; and prevention, health promotion, and wellness.²² Participants also described how their evaluation, rehabilitation, and clinical reasoning skills improved over years of clinical practice, which is consistent with the literature.^{9,11,14, 43} Regarding reasoning, newer clinicians tend to utilize hypothetical deductive reasoning, and experienced clinicians rely on case pattern recognition, which is a more efficient and advanced clinical reasoning strategy.⁴³

Athletic training programs should strive to improve student clinical competence upon graduation, specifically looking to improve competence within the domain of therapeutic intervention. Faculty should design more clinical education experiences that allow students to treat patients through the entirety of their rehabilitation. Therefore, students can work with preceptors to create individualized rehabilitation plans, progress patients, and experience the healing process from start to finish.

Participants also discussed the need for continuing education and reflective practice. Students graduating from CAATE accredited programs should have an entry level understanding of how to practice evidence-based health care²² and understand the importance of life long learning as a means of continual professional development.⁴⁴ Continuing education is also valued in medicine, as medical students consider continuing education essential to build on theoretical knowledge, learn new techniques, and become better providers.²³ Evidence-based practice is also included in the education standards of athletic training and the National Academy of Medicine core competencies.^{22,38}

Reflective practice is emphasized in the literature and valued across healthcare professions including athletic training, physical therapy, nursing, and medicine.⁴⁵⁻⁴⁸ Reflective practice has been used to improve patient care, promote collaboration, and advance clinical reasoning.⁴⁵⁻⁴⁸ Unfortunately, reflection tends to decrease with increasing years of practice due to clinicians gaining confidence.⁴⁶⁻⁴⁸ Athletic training programs should include reflective practice in clinical education. Programs can promote reflective practice through preceptor education, creating a supportive and individualized learning environment, journaling, and formal mentoring programs.⁴⁶

Theme.4: Confidence

Participants viewed confidence as an essential trait for professional practice, but one that improved significantly over time. Confidence is valuable, as athletic trainers must be able to practice autonomously and provide safe patient care.¹ Furthermore, it is common for newer professionals in the fields of athletic training, physical therapy, occupational therapy, and nursing to be less confident than experienced clinicians. Comfort with autonomous practice is expected to take 1-2 years.^{1,9,16,49-51}

Limitations

Participants were limited to “certified professional” members of the NATA with computer access. Although participants were representative of a variety of work settings, not all settings for athletic trainers were represented in the study. Lastly, accuracy of data analysis was limited by participant honesty and the interpretation of the researcher.

Conclusion

Our study further explored the factors of professional readiness in athletic training. Readiness for professional practice is comprised of knowledge and skills in the areas of management, clinical decision-making, and interpersonal relations, in addition to confidence. Participants explained the value of a well-rounded athletic trainer and emphasized that athletic trainers need communication and organizational skills, the ability to collaborate, and must value self-reflection and continuing education in addition to having clinical expertise. Our findings also indicate athletic training programs should better develop student skillsets within the content areas of healthcare administration and rehabilitation, which participants cited to be areas of weakness. Additionally, as the athletic training profession moves to the professional masters degree and incorporates immersive clinical experiences, programs must ensure students are being properly

mentored to better prepare them for a successful transition to practice where new professionals may be working in isolation from other providers.

Future research should explore ways to improve athletic training education and produce new professionals who are more confident and feel more prepared for autonomous practice. Researchers should specifically explore methods of improving education in the areas that have shown to be challenging for new graduates, such as rehabilitation and administration. Future research should also analyze the perceived factors of professional readiness among various demographics of athletic trainers to provide insight into how one's personal life experiences affect their perceptions of professional readiness. Additionally, research should be conducted to finalize a comprehensive model of professional readiness for athletic training and develop a holistic assessment instrument for athletic training professional readiness to explore the preparedness of new athletic trainers as athletic training education transitions to the professional masters degree.

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