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## Athletic Directors' Perceptions Regarding the Value of Employing Athletic Trainers in the Secondary School Setting

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### Abstract

There is currently a limited understanding of the value of athletic trainers (ATs) working in the secondary school setting. Therefore, our objective was to explore high school athletic directors' perceptions of an AT's roles and services and the means in which those perceptions are established, specifically as they relate to the value of ATs. A qualitative methodology was utilized for this investigation. High school athletic directors were interviewed regarding their experiences with the use of athletic training services. Data was analyzed using the consensual qualitative research approach. Athletic directors demonstrated an overall understanding of the roles and responsibilities fulfilled by ATs. The value of ATs was associated with factors such as enhanced athlete safety, reduction of costs for parents, and increased productivity of coaches. Overall, athletic directors display a favorable view of ATs, however support for these positions predominantly relies on anecdotal evidence rather than data to validate the use of athletic training services.

**Keywords:** athletic administration, sport safety, performance evaluation, athletic healthcare

### 1. Background

Current evidence on sport participation risk mitigation and "best practice" recommendations supporting the use of athletic trainers (ATs) in secondary schools (Almquist et al., 2008; American Academy of Pediatrics [AAP], 2001; Casa et al., 2013; Casa et al., 2012; Drezner et al., 2007; LaBella, Henke, Collins, & Comstock, 2012; Lyznicki, Riggs, & Champion, 1999) are slow to encourage school systems to consider ATs as a critical necessity within their athletic programs, as exemplified by less than 50% of high schools across the country regularly providing athletic training services to their student-athletes (Pryor et al., 2015). Barriers to the employment of ATs have been investigated (Mazerolle, Raso, Pagnotta, Stearns, & Casa, 2015; Pike, Pryor, Mazerolle, Stearns, & Casa, 2016; Pryor et al., 2015), with budget restraints persisting as the primary barrier to creating athletic training positions within schools (Clines et al., 2018; Mazerolle et al., 2015; Pike et al., 2016). Misunderstanding of the profession of athletic training has also been thought to be a contributing factor to the barriers of employing ATs (Mazerolle et al., 2015; Pike et al., 2016).

A lack of understanding of the roles, responsibilities, and education of an AT has been identified in several populations including administrators (Feeling, 2003; Mazerolle et al., 2015; Pike et al., 2016), parents (Hoppel, Huck, Stemmans, Ingersoll, & Cordova, 2001; Weitzel, Miller, Giannotta, & Newman, 2015), and coaches (Mensch, Crews, & Mitchell, 2005).

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Despite this lack of knowledge regarding the athletic training profession those who have had prior positive interactions with ATs have demonstrated a general understanding of the AT's roles and hold an overall positive view of the AT's position (Feeling, 2003; Mensch et al., 2005; Weitzel et al., 2015). While these findings are promising, there is still limited information on how the positive perception of the AT impacts their value to the school system and associated decision making process to hire these healthcare professionals.

The value of ATs working within non-traditional clinical settings has been well established (Frogner, Westerman, & DiPietro, 2015; Hajart, Pecha, Hasty, Burfeind, & Greene, 2014; Pecha, Xerogeanes, Karas, Himes, & Mines, 2013; Zimmerman, 1993), while the traditional settings have currently remained unexplored. As a result, understanding the value of an AT within the secondary school setting has become an important focus of the National Athletic Trainers' Association (NATA). In order to assist ATs working within the high school setting to identify their value, the NATA has developed the Secondary School Value Model (NATA, 2015) with the objective of providing ATs with a strategy to demonstrate their value and worth. A primary focus of the recommendation is to utilize documentation, preferably in the form of electronic medical records (EMR), to generate data that can be provided to administrators to demonstrate the worth of the AT's position. However, the methodology of utilizing the Secondary School Value Model has yet to be empirically tested, therefore no current evidence is available that we are aware of to support that following this recommendation will be well received by the target audience of stakeholders or align with the organizational objectives and needs of the school.

Organizational role theory (Katz & Kahn, 1966) suggests that there is an interaction between one's roles within an organization and the impact those roles have on achieving the organization's goals. The process of establishing employee roles and responsibilities is best described as a sequence of cyclical role episodes in which a member set of the organization establishes expectations for the focal person, communicates those expectations to the focal person, then observes and evaluates the focal person's work behaviors in relation to the organization's needs (Katz & Kahn, 1966). Organizational role theory, with particular attention to the area of work-life conflict, has been explored within the athletic setting (Dixon & Bruening, 2005; Inglis & Danylchuk, 1996; Pastore, Inglis, & Danylchuk, 1996), including in the athletic training population (Eason, Mazerolle, & Goodman, 2014; Mazerolle, Bruening, & Casa, 2008; Pitney, Mazerolle, & Pagnotta, 2011). However, research within the athletic organizational system has yet to explore the fundamental principle of the role episode as a means of understanding the establishment and assessment of roles. Within the dynamic between the athletic director and AT the observation and evaluation processes that characterize the role episode occurs. Understanding this evaluative process and identifying the perceptions associated with the utilization of ATs in the secondary school setting by an athletic administrator may provide key information to assist in understanding the needs of the organization and how the AT position can fulfill those needs. Therefore, the following study was conducted to provide a foundation for the understanding of the roles of an AT and their associated value to the achievement of the organizational needs within a secondary school athletic program.

## **2. Methods**

### **2.1 Research Design**

A qualitative methodology was selected due to the foundational nature of this study. The consensual qualitative research (CQR) approach was used to analyze the data (Hill et al., 2005; Hill, Thompson, & Nutt-Williams, 1997). Born from principles of phenomenology and grounded theory, the CQR tradition utilizes a team of researchers to understand participant experiences and associated phenomena through descriptive analysis (Hill et al., 2005; Hill et al., 1997).

### **2.2 Participants**

High school athletic directors throughout the United States employed in a school that currently utilizes the services of a full-time, Board of Certification (BOC) credentialed AT served as participants for this investigation. Inclusion criteria consisted of the athletic director's employment within their current school for a minimum of two academic years. Schools were also limited to those with a history of provision of athletic training services for at least one full year prior to the time of interview. Athletic trainers within those schools must also be users of the CORE-AT EMR program (Athletic Training Practice Based Research Network [AT-PBRN], 2017).

The employment model and duties of the ATs were not limited, therefore the responsibilities of the ATs could include the provision of athletic training services and teaching. Other demographic factors such as institutional type and size of the school and athletic program were not restricted.

### 2.3 Data Collection Procedures

Institutional review board approval was obtained before recruitment and data collection. Participants were recruited purposefully using a criterion sampling method (Patton, 2002). A list of schools meeting the inclusion criteria was requested from the Athletic Training Practice Based Research Network (AT-PBRN)(Valovich McLeod et al., 2012). Seventy one schools were identified from the AT-PBRN and cross referenced with the NATA Athletic Training Locations and Services (ATLAS) database (Korey Stringer Institute [KSI], 2018) to verify the inclusion criteria of full-time status of the AT. ATLAS defines full-time status as an AT that provides athletic training services to only one school for a minimum of 30 hours per week, no less than 5 days per week, for at least 10 months of the calendar year (KSI, 2018). After verification, 36 potential schools (32 public, 4 private) were identified. Using publically accessible school websites, email addresses and phone numbers of potential participants were collected. The principal investigator then sent an email detailing the purpose of the study and the contact information of the investigators to potential participants. Participants received a maximum of three emails at least one week apart. If no response was provided after the third email potential participants received one phone call in attempt to recruit their participation. Those interested in participating either replied to the contacting investigator's email or verbally agreed over the phone to schedule an interview. All participants completed a consent form prior to data collection. Each participant received a \$50 gift card for their participation.

Individual telephone interviews lasted approximately 40 minutes and were conducted following a semi-structured interview guide. Participant recruitment and data collection were guided by data saturation (Hayes & Singh, 2012; Hill et al., 2005; Hill et al., 1997). A total of 10 secondary school athletic directors participated in this investigation (male = 7, female = 3;  $9.4 \pm 5.5$  total years of experience as a secondary school athletic director). Participant demographics were presented in an earlier study (Clines et al., 2018).

The interview guide consisted of three main sections including basic demographic information and two sections of open-ended questions regarding the athletic director's experience regarding the utilization of ATs in the high school setting. The interview protocol was developed using current literature available on the utilization of secondary school ATs (Mazerolle et al., 2015; Pike et al., 2016; Pryor et al., 2015) and principles of organizational role theory (Katz & Kahn, 1978). All phone interviews were digitally recorded with participant consent and transcribed verbatim by a professional transcription service. For consistency, the primary researcher conducted all phone interviews. Once transcription was complete, the individual transcripts were sent to all 10 participants for voluntary review to ensure accuracy and clarity of the transcripts prior to data analysis.

### 2.4 Data Analysis

Data analysis followed the methodology of the consensual qualitative research (CQR) approach (Hill et al., 2005; Hill et al., 1997) as described in an earlier study (Author, year). The importance of providing objective findings were imperative to the potential success of this project, therefore several strategies were used to establish trustworthiness of the data (Hayes & Singh, 2012; Pitney, 2004). First, peer review of the interview guide was conducted by an external researcher to reduce bias within the instrumentation. Second, field notes were collected by the interviewer during the interviews. Third, participants were provided with the opportunity to review their transcripts for accuracy prior to data analysis in a process known as member checking. No changes to the transcripts were required after member checking was complete. Last, emphasis on consensus development between team members inherently built within the CQR tradition enabled the research team to generate unbiased results through intercoder reliability and peer debriefing (Hill et al., 2005; Hill et al., 1997).

## 3. Results

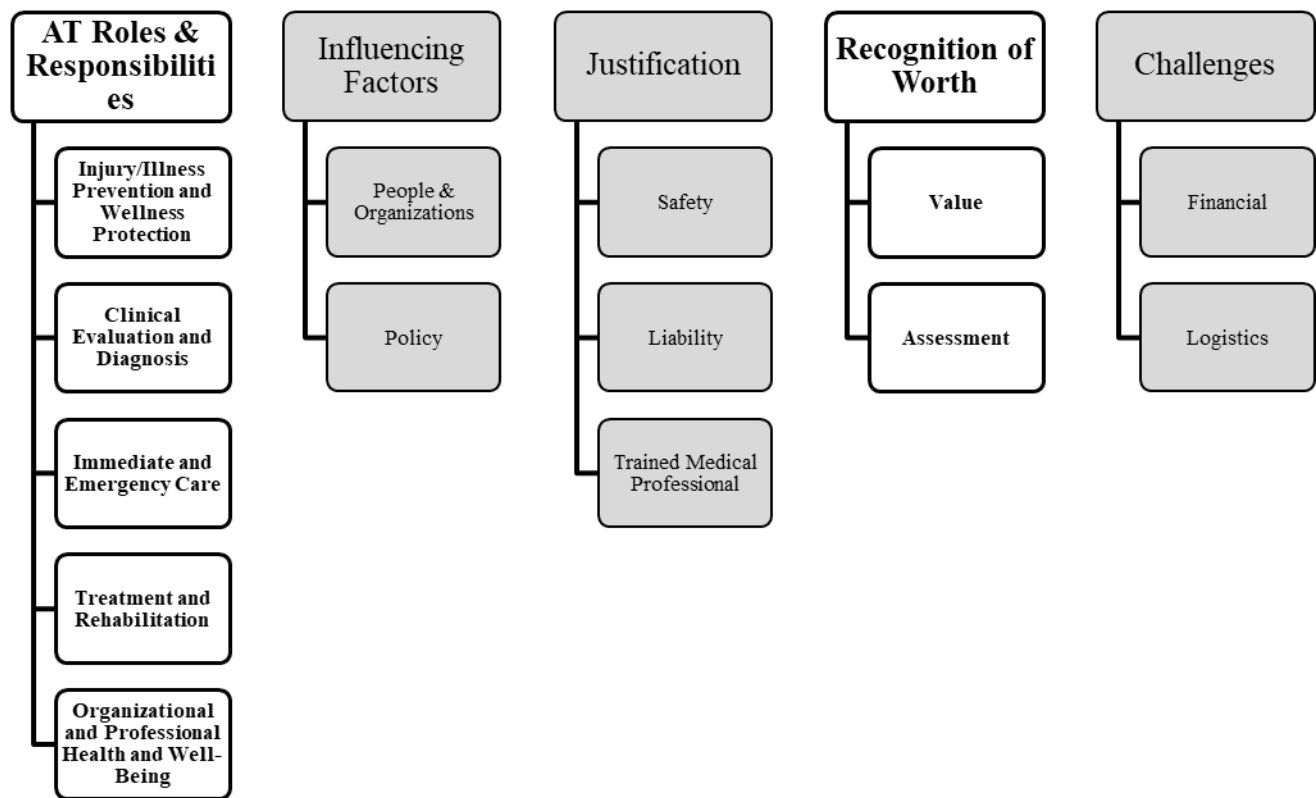
A total of five themes emerged that describe athletic directors' experiences with the utilization of athletic training services in the secondary school setting. For the purposes of this study we focused on athletic directors' perceptions of the value of ATs within their athletic programs and the means in which that perception is established.

The CQR analysis revealed two themes related to the valuation of ATs: 1) AT roles and responsibilities and 2) recognition of worth. Each theme was further divided into subthemes (Figure 1). The frequency of participant cases for each subtheme all aligned with the general or typical categories (Table 1).

### 3.1 AT Roles and Responsibilities

Athletic directors demonstrated an overall understanding of the athletic training profession by identifying the services provided and roles and responsibilities fulfilled by the ATs working within their respective schools (Table 2). The AT roles and responsibilities theme was further divided into five subthemes which corresponded with the five domains of athletic training

Figure 1. Emergent themes and subthemes. This paper focuses on the themes of AT roles and responsibilities and recognition of worth.



As identified by the BOC Role Delineation Study (Henderson, 2015): (1) Injury/Illness Prevention and Wellness Protection, (2) Clinical Evaluation and Diagnosis, (3) Immediate and Emergency Care, (4) Treatment and Rehabilitation, and (5) Organizational and Professional Health and Well-Being.

**Table 1. Participant Cases by Theme (N = 10)**

Theme and Subtheme	Frequency	No. of Participant Cases
<b>AT Roles &amp; Responsibilities</b>		
Injury/Illness Prevention and Wellness Protection	General	9
Clinical Evaluation and Diagnosis	General	9
Immediate and Emergency Care	General	10
Treatment and Rehabilitation	General	10
Organizational and Professional Health and Well-Being	General	10
<b>Recognition of Worth</b>		
Value	General	10
Assessment	General	10

Frequency Components: General = all or all but one; Typical = 5 or more; Variant = 4 or less; Rare = only 1 case.

The majority of participants identified at least one role or responsibility that corresponded with all five domains of athletic training with the most participants discussing responsibilities such as taping or strapping, injury evaluation, acute care, injury prevention, concussion evaluation and management, athlete hydration, treatment, and injury documentation. While at least one role or responsibility categorized under the domains was identified, not all athletic directors described the same services provided by ATs within their schools. Less frequently participants identified roles such as equipment fitting, emergency action plan development and implementation, monitoring of environmental conditions, strength and conditioning or performance training, CPR and first-aid instruction, administrative responsibilities related to pre-participation examinations, business functions such as budgeting and supply management, and formal teaching roles within the school. For example, when asked to describe the services provided by the AT at his school, Tony's response captured three of the five domains of athletic training,

Taping, treatment, evaluation , first responder evaluation on injuries, emotional support through recovery, rehabilitation, overseeing rehabilitation, communication with parents regarding injuries, communication with the school regarding injuries so that that message has been rolled out by the school nurse to the teachers. For example, if a [student] has a concussion, [the athletic] trainer lets the nurse know, copies me, the nurse sends it out to the teachers and the guidance counselors and everybody so that they're aware that the [student] has suffered an injury.

### **3.2 Recognition of Worth**

The recognition of worth theme is characterized by the evaluation of and appreciation for the AT's position by the athletic directors and consisted of two subthemes: (1) value and (2) assessment.

#### **3.2.1 Value.**

Consistent with the definition provided by the NATA Secondary School Value Model(NATA, 2015),value was defined as "the extent to which a service's worth is perceived," where worth is defined as the "monetary cost of a service." Therefore, responses pertaining to how the participant perceived the cost of services as well as the usefulness of the services provided by the AT were coded under the value subdomain. The value of ATs was discussed in several different contexts based on the participant's experiences. Our participants identified an overall positive perception of ATs, using words like "invaluable," "essential," and "crucial" to describe the use of ATs in their schools. Several participants emphasized how the AT has enhanced the environment of the athletic program through the rapport the AT has with the athletes and the mentorship they often provide.

**Table 2. Supporting Quotes for AT Roles and Responsibilities Theme and Subthemes**

Subtheme	Supporting Quotes
Injury/Illness Prevention and Wellness Protection	“Educate our coaches on proper protocols for concussions and injuries and any other kind of emergencies. I also make him, he’s in charge of lightning and making sure we’re doing that correctly.” – Hank
Clinical Evaluation and Diagnosis	“He is also a certified CPR trainer, and so he’s also provided that service to our coaches and then to students.” - Bruce “Anybody that’s hurt or been hurt reports to her during that period of athletics.” – Arthur “They also do a huge sideline concussion protocol.” – Kara
Immediate and Emergency Care	“[Our athletic trainer] has her radio on and has her phone on and if there’s an emergency, she’s off and running.” - Selina “They’re kind of the first responders that we have at our school. So, immediately if there is an injury, they’ll go kind of figure out what it is, is it serious?” – Kara
Treatment and Rehabilitation	“Sometimes it’s icing, sometimes it’s e-stim, sometimes it’s heat treatment, sometimes it’s whirlpool. He does a lot of exercises with the kids; band therapy, range of motion therapy, resistance therapy, that type of stuff that I’ve seen him do.” – Diana “Massage, working on muscles, strength development.” - Hank
Organizational and Professional Health and Well-Being	“They keep their own [athletic] trainer’s log about who they saw, when they saw them, what was evaluated, whatever they did with them.”– Clark “Ordering medical equipment and supplies, maintaining the [athletic] training room and all the equipment.” – Tony “She does injury reports, she tracks if they go see another doctor, she tracks those things.” - Arthur

Abbreviations: AT, athletic trainer.

Clark shared, They work really well with the students and the fact the office I’m in right now is next door to the [athletic] training room and it’s lunchtime and you hear plenty of people in there and they’re not just getting [treatment and rehabilitation]. They’re talking and chatting and so it’s a hub for the athletic department.

The provision of immediate, on-site care for student-athletes was also discussed as a value to our participants. Arthur discussed the convenience that having an AT provides saying, “If we get somebody hurt it’s not like we have to load them up and take them over to the clinic, we don’t have to call somebody.” Continuity of care was also an important aspect of having on-site medical care for student-athletes. Selina expressed her appreciation for the quality of care the student-athletes at her school receive from the AT,

I think for the constant care that some [students] are getting, it’s a daily touchpoint to keep track of their progress, where I know they wouldn’t be going into their doctor or their physical therapist on a daily basis. So, it’s a constant care, it’s a daily care that they wouldn’t get otherwise... for those [students] that [our athletic trainer] sees on a daily basis and is helping every day, there’s not a quantifiable price tag that I could even put on that. The service that we have is phenomenal.

The value of the AT was also discussed in the context of finances, with participants indicating that they feel there is a high value to the services an AT provides in relation to the cost of having one on staff. Wally shared, “I have to imagine that we get more service than we pay for. And the reason I say that is because I think if we were paying for everything line item, I think it would cost us more.” Selina shared the same feeling saying, “I think we



definitely get more value for our money.” Financial cost, or worth, associated with employing an AT was always discussed in the context of the AT’s salary. Occasionally the athletic department budget related to supplies was also noted. The majority of athletic directors were unaware or uncertain of the exact financial cost associated with the AT’s position within their school. For example, Diana said, “In fact, I know that we were told their original salary and I don’t even remember what that was. But that doesn’t include any of the supplies.” Our participants also identified that a formal assessment of comparative costs for AT services is not completed within their athletic programs. Arthur, discussing whether he or his school has ever compared the costs of an AT to different healthcare professionals to serve the athletic program, said,

I don’t know that we’ve ever done that comparison, but I’m sure it would be more. If we outsourced it and paid somebody to be here every day on the daily basis, it would probably add up to more than what [our athletic trainer] makes.

The ability to save student-athletes and their families’ time and money was also identified as a value perceived by our participants. Tony said, “I’m not an expert on healthcare costs, but I know that it is going to be a lot more expensive and more time consuming to send a kid to a doctor every time they’ve got something.” Diana also shared how she feels having an AT at her school can help parents reduce both monetary and opportunity costs, A lot of times it’s helping parents out where they don’t necessarily have to go see a doctor. I mean, [our athletic trainer] is always going to refer them to a doctor when needed, or even if he’s questioning whether it’s needed. But sometimes, when he can evaluate it and okay, this is not a tear, this is a strain, he can do that, where it saves the parents the time and money that it would maybe cost to go see a doctor.

### **3.2.2 Assessment.**

In the evaluation of the AT’s position our participants revealed that direct assessments through the athletic department rarely occurred. Only 3 of 10 participants indicated that the AT’s position was formally evaluated through the athletic department, all of whom described the athletic department’s evaluation as generic, focusing on areas such as professionalism, personable demeanor, and goal setting. Formal performance evaluations typically occurred through the hiring source of the AT, particularly for those hired through a hospital network or clinic outreach employment model. Athletic trainers hired directly through the school districts often had teaching responsibilities and were assessed on their teaching, but not on their clinical responsibilities. Regarding the athletic director’s assessment, the majority of our participants reported that observation of the AT within the workplace served as a sufficient method of evaluating the AT’s performance. Matthew explained,

I see the athletic trainer probably daily and will stick my head in the office and ask him how things are going. And again, if I don’t hear bad news, any negative things from the head coaches, I just assume things are going awesome.

All of our participants identified that the ATs at their schools are regularly generating data, mostly in the form of injury reports. Additional forms of data discussed included de-identified patient data such as injury trends, total patient encounters, and hours of athletic training services provided. However, use of data by the athletic directors was varied. None of our participants utilized the data to directly evaluate the AT’s position within the athletic program. Additionally, the majority of our participants acknowledged that they did not review data gathered by the AT on a regular basis. For the few athletic directors that were requesting and using data gathered by the AT, their uses included general information sharing regarding player injury status, coach assessments, and basic injury surveillance. Hank explained how he uses the injury reports provided to him, “I use [the data] to evaluate my coaches, some of it. And then we evaluate the need for injury prevention kind of stuff and the need for proper form and proper technique and everything we do.” Wally explained how the data keeps him informed about the athletes competing within his athletic program,

It gives me an idea about what’s going on and I have an idea, hey, so and so is on the sideline, why has that happened? I have that information. I feel like it keeps me in the loop as far as what’s going on with all my sports and everything like that.

## 4. Discussion

### 4.1. *The evaluation of athletic trainers*

Knowledge of and appreciation for the AT's roles and responsibilities was largely affiliated with athletic directors' experiences working with and, most predominantly, observing the AT complete their duties. This observation of the AT had a significant influence on athletic directors' perceptions of the AT's role, supporting the overall principles of organizational role theory regarding the establishment of role expectations made by supervisors (Katz & Kahn, 1978). Additionally, the favorable view of the AT's position developed through professional interaction, supporting previous literature regarding the link between positive interaction with ATs and a general understanding of the AT's roles (Feeling, 2003; Mensch et al., 2005; Weitzel et al., 2015).

Consequently, observation was identified as the sole component in the athletic director's assessment of the AT's position, as the vast majority of participants revealed that despite their supervisory role over the athletic department no formal evaluation of the AT's clinical responsibilities was conducted within these schools. Alternately, formal evaluation of the AT's position was deferred to individuals associated with the hiring source of the AT. In a decentralized organizational structure, like the one referenced by participants, decision-making authority is delegated to other individuals within the organization who best understand the specifics of a situation (Slack & Parent, 2006). The transfer of assessment of the AT's position to the hiring source may be related to the athletic director's general understanding of the athletic training profession, but lack of detailed knowledge required to appropriately evaluate the AT's performance. As a result, athletic directors transfer authority of performance evaluations to the individuals they believe are most informed to make those assessments. In most secondary school settings, however, the hiring source is often a separate organization that has established a partnership with the school to provide athletic training services.

This unique decentralized structure of assessment may provide challenges to appropriate review of the AT's position, as the hiring organization may have different goals or expectations than the other stakeholders invested in the utilization of the AT, such as the athletic department or school board. As a result, the evaluation criteria of one entity may be irrelevant to another entity in the hiring partnership.

It is not uncommon for healthcare providers working within school systems to encounter challenges related to appropriate performance evaluation due to the unique orientation of their role within the school. The development of a standardized assessment for the evaluation of school nurses emerged out of similar concerns of appropriate performance review as school nurses were once also evaluated using teaching or administrative performance checklists (Southall et al., 2017). The National Association of School Nurses (NASN) (2013) advocates for the supervision and evaluation of school nurses to be conducted by a licensed, registered nurse with knowledge on the practice of school nursing, rather than a non-nurse supervisor. However, challenges in availability of nurse administrators employed directly within school systems to fill this supervisory role exist. Alternatively, a school nurse evaluation tool has been designed using the professional standards of school nursing practice as a framework to focus on clinical competency and professionalism, which can be used as both an administrative (i.e. non-clinical supervisor) and self-assessment tool. The use of these competency based assessments has allowed for the roles of school nurses to be more comprehensive by broadening the scope of the position and eliminating task-oriented expectations (McDaniel, Overman, Guttu, & Keehner Engelke, 2012). Additionally, a more clinically specific evaluation tool has been associated with an increase in school administrators' knowledge regarding the role of the school nurse (Green & Reffel, 2009). A similar standardized model of evaluation for ATs within secondary school athletic departments may provide more pertinent information regarding the performance and usefulness of the AT that is centralized to the school, thus providing a stronger foundation for justification of the utilization of ATs within this setting. Due to the complexity of the logistics surrounding the employment of the AT it may prove most effective to have multiple individuals directly involved with oversight of the AT's clinical duties within the school, such as the supervising physician, the AT, and the athletic director, complete an assessment related to the AT's performance to provide a more comprehensive and appropriate evaluation.

### 4.2. *Influencing the decision to utilize athletic trainers*

The NATA Secondary School Value Model (NATA, 2015) recommends that ATs utilize data driven materials to provide to various stakeholders to aid in quantifying the value of their positions within the school system. However, rather than utilizing a formal evaluation or data driven materials to aid in the justification of the AT's position, anecdotal evidence emerged as the preferred source of confirmation that ATs provide a benefit to the

athletic program. The importance of data collection and utilization in athletic training is evident through the establishment of the AT-PBRN (Valovich McLeod et al., 2012) and other injury surveillance networks (Borowski, Yard, Fields, & Comstock, 2008; Dompier, Marshall, Kerr, & Hayden, 2015) aiming to describe the characteristics of the athletic training profession, its patient populations, and the outcomes of care provided to these patients by ATs in the secondary school setting. Data driven materials can be tailored to measure specific desired outcomes, such as injury prevention or patient encounters. Regardless of the outcome measured, the development of these data based evaluation materials is instrumental in objectively demonstrating the importance of ATs as healthcare professionals and to shift the consumers' mindset from the simple provision of athletic event "coverage" to a more comprehensive provision of athletic healthcare services (NATA, 2015). While these findings demonstrate an indifference in the need to receive data driven information by athletic directors who are already familiar with the functions of an AT, the use of this type of information may be better suited for those who are less educated on the athletic training profession or have less opportunity to observe the services that can be provided by an AT within the secondary school setting.

Financially driven and budget conscious decision making is occurring within school boards and districts. However, the challenge and complexity of quantifying intangible benefits (Gyorgy, Vintila, & Gaman, 2014) was exemplified by athletic directors who perceived the value of services provided by ATs to overshadow the monetary cost associated with the AT's employment. This emphasis on value over worth parallels principles of social exchange theory, which highlights through cost-benefit analysis that people will continue a relationship if they perceive the reward to be greater than the cost (Drèze & Stern, 1987), such as in the way athletic directors perceived the benefits of having an AT to be greater than the associated financial impacts. While participants identified that formal cost-benefit analyses are not conducted, it is apparent through their responses that a hypothetical comparison of the costs and value of employing an AT is being considered.

Cost-benefit analysis on the use of school nurses have identified a reduction in loss of productivity for both parents and teachers (Wang et al., 2014). Similarly, athletic directors highlighted how the access to an AT within their school not only reduced out-of-pocket cost for parents but also reduced opportunity-costs such as time required to seek additional care for an injured child or time lost from athletic participation by student-athletes. Participants also emphasized the reduction in loss of productivity by coaches who were now able to focus on their coaching responsibilities rather than be distracted by managing healthcare needs of the student-athletes (Clines et al., 2018). These findings highlight the importance of considering both direct costs, such as salary or supply budgets, and indirect costs, such as time and productivity, when conducting cost-benefit assessments related to the AT's position.

#### **4.3. Limitations and future research.**

While athletic directors in this study demonstrated a strong overall awareness of the qualifications and professional duties of an AT, it is important to note that participants were not asked to identify roles or responsibilities specifically categorized under a given domain of athletic training at any time during this investigation. Rather, discussions of the roles and responsibilities characteristic of the athletic training profession developed in an organic manner throughout the interview. As a result, participants' understanding of the full scope of practice of an AT may be limited, as some athletic directors only discussed one of the many responsibilities or skills of their AT that align within each domain. This abridged knowledge may demonstrate a potential need for further education of athletic directors regarding the athletic training profession.

Explorations surrounding the use of data driven materials may provide insight into the effectiveness of the NATA Secondary School Value Model (NATA, 2015). Future research regarding current documentation practices and data supported material generation by secondary school ATs is necessary to identify whether practicing clinicians are following the recommendations to use documentation to support their positions. Subsequently, more information is also needed regarding the various stakeholders attitudes towards receiving these data supported materials, as the need for additional information, such as data, to inform the decision making process within educational administration has emerged over time (Crum, 2007). The combination of explorations in both of these areas may uncover valuable information regarding the most effective strategies to justifying the use of secondary school ATs across multiple stakeholders.

Additionally, investigations regarding a centralized AT evaluation tool may also produce an additional data driven resource that can aid in supporting the AT's position. The benefit of a standardized assessment model for other school based healthcare providers has proven useful in the evaluation of their respective positions (Green & Reffel, 2009; McDaniel et al., 2012; Southall et al., 2017). However, it is currently unknown if these evaluation tools will also prove effective in validating the benefits of ATs in this setting. Furthermore, it is unclear which individual or individuals are best suited to conduct these evaluations. Therefore, future research should address whether the development and utilization of a similar clinically focused athletic training assessment model can provide comparable outcomes regarding the perceptions of and need for ATs in the secondary school setting.

## 6. Conclusion

This exploration provides valuable insight into the perceptions of the provision of athletic training services within the secondary school setting. These findings identified that athletic directors employed in schools that utilize athletic training services have a great appreciation for and positive view of secondary school ATs. Athletic directors also demonstrated a general understanding of the roles, responsibilities, and services provided by ATs working in their schools. These perceptions and awareness of the AT's roles and responsibilities is likely connected with the athletic director's daily interaction with and observation of the ATs working in their schools. Additionally, athletic directors viewed ATs as the ideal professionals to provide healthcare services to student-athletes, describing not only the benefits ATs can provide to their personal role as athletic director, but also the benefits of athletic training services that extend to coaches, student-athletes, and parents as well.

School board members were identified as holding the highest level of authority in regards to the decision making processes that occur within public education, including the decision to utilize athletic training services. Financial considerations persist as a key factor in the decision making processes within school boards.

Athletic directors felt they still had a role in influencing school board decisions that pertain to the athletic program, yet the value of secondary school ATs perceived by this population is predominantly supported by anecdotal evidence rather than the use of formalized assessment measures or data driven materials. This lack of structured assessment or collection of tangible evidence to support the AT's position could be a key factor in influencing the perceived need for ATs within secondary schools. This type of information could be of particular interest to school board members who may have less interaction with the ATs working in their school system, yet make decisions that impact the AT's position. Future research targeting higher level educational administrators may provide better insight on how to more effectively demonstrate the value of ATs within the secondary school setting.

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