Fall 2013

NCAA Division I Coaches and Athletic Trainers: An Examination of Professional Relationships and Knowledge of the Athletic Training Profession

Laura Alexander
San Jose State University

NCAA DIVISION I COACHES AND ATHLETIC TRAINERS: AN EXAMINATION OF PROFESSIONAL RELATIONSHIPS AND KNOWLEDGE OF THE ATHLETIC TRAINING PROFESSION

A Thesis

Presented to

The Faculty of the Department of Kinesiology

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Laura Hassen Alexander

December 2013

The Designated Thesis Committee Approve the Thesis Titled

NCAA DIVISION I COACHES AND ATHLETIC TRAINERS: AN EXAMINATION OF PROFESSIONAL RELATIONSHIPS AND KNOWLEDGE OF THE ATHLETIC TRAINING PROFESSION

by

Laura H, Alexander

APPROVED FOR THE DEPARTMENT OF KINESIOLOGY

San José State University

December 2013

Dr. Jessica W. Chin	Department of Kinesiology
Dr. Emily H. Wughalter	Department of Kinesiology
Holly L. Brown	Department of Kinesiology

ABSTRACT

NCAA DIVISION I COACHES AND ATHLETIC TRAINERS: AN EXAMINATION OF PROFESSIONAL RELATIONSHIPS AND KNOWLEDGE OF THE ATHLETIC TRAINING PROFESSION

by Laura H. Alexander

The goal of this study was to explore coaches' experience with athletic trainers (ATs) and knowledge of their roles and responsibilities at the NCAA Division I level. The data collection involved a questionnaire and follow-up phone interviews. The survey was sent out to all 144 official head coaches of NCAA Division I universities in the Bay Area region of California, as defined by the California Department of Social Services in 2002, and there was a 22% (*n*=31) return rate. Nearly 60% (*n*=18) of coaches said they communicated with their athletic trainer over five times per week. Another ~60% (*n*=20-*n*=28) of the participants correctly identified all of the competencies under each domain of the athletic training profession. Of the 31 participants who participated in the survey, four participated in the follow-up interviews. The data from the follow-up interviews were organized into four higher order themes: qualities of the relationship between the AT and the coach, coaches' desired personality traits of an AT, qualities of the AT as a professional, and causes of conflict between the AT and coach. The participating coaches provided evidence that they are well versed in the profession of athletic training and have strong knowledge regarding the roles and responsibilities that are designated

under this profession's scope of practice. In addition, all the coaches emphasized the importance of good communication within a professional relationship.

ACKNOWLEDGEMENTS

This thesis has come together with the help of many people. To the committee members who worked toward the success of this project: thank you Dr. Jessica Chin, Dr. Emily Wughalter, and Holly Brown. Most importantly, I would like to thank my thesis chair, Dr. Jessica Chin. Dr. Chin, your intelligence is mind-blowing. Thank you for leading me every step of the way while creating this thesis. You have been a great mentor. In selecting you as my committee chair, I know this thesis will reach its greatest potential. Dr. Wughalter, thank you for opening my eyes to the world of quantitative research without which, I would not have known the potential of this project. Holly Brown, thank you for believing in me no matter what I was striving to achieve. Your strength is phenomenal and without you, graduate school would not have been nearly as bright. Last but certainly not least, this thesis would never have had an opportunity had it not been for Asher Falatic. Thank you for taking thirty seconds to convince me that a thesis was not just the best option, but the only option. Thank you for convincing me that in the end I would be proud of my accomplishment and happy I chose the path I did. You were right.

Table of Contents

Chapter 1 Introduction

Athletic trainers provide medical services to various populations in multiple settings, including rehabilitation clinics, hospitals, the military, and businesses. However, athletic trainers are most commonly recognized for their contributions to the athletic community, specifically within high school and collegiate settings (National Athletic Trainers' Association, 2011a). Within athletics, athletic trainers work closely with members of a sports medicine team that include the athlete, the coach, a team physician, an administrator, and a certified athletic trainer (AT) (Fu, Tjoumakaris, & Buoncristiani, 2007). The certified athletic trainer coordinates with the team and communicates regularly with an athlete about his or her physical health and medical conditions.

In optimal situations, the athlete and AT develop a personal, trusting relationship whereby the athletic trainer is the first contact for an athlete experiencing a medical complication or injury that may warrant treatment. Along with competent skills in rehabilitation, evaluation, and diagnosis, athletic trainers must also possess organizational and communication skills. As the gatekeepers of the sports medicine team, it is critical that athletic trainers maintain consistent open communication with all the other members of the team when issues arise. Both athletic trainers and coaches have identified positive communication as an integral component to having a good athletic trainer- coach relationship (Starkey, 2004). It is important that all members of the sports medicine team have one common goal: to create an environment where an athlete's safe return to play can be achieved (Fu et al., 2007).

The National Athletic Trainers' Association (NATA) is the professional membership organization for certified athletic trainers. For athletic trainers, the membership is not only a way to support their profession but can also provide members with a wide array of benefits. The NATA works to keep the NATA's mission statement, bylaws, and code of ethics up to date with current issues and maintained with long standing ideals. The NATA does not, however, manage the certification and continuing education of athletic trainers (NATA, 2013). The Board of Certification (BOC) provides a certification program for entry-level ATs as well as establishes and regularly reviews both the standards of practice for the profession of athletic training and continuing education requirements for BOC certified athletic trainers. There is no other accredited certification program for athletic trainers in the United States (Board of Certification, Inc., 2012).

Coaches sometimes do not recognize an athletic trainer's value to a team, and there are various misconceptions about the contributions an athletic trainer can make to the health and success of a team (Mensch, Crews, & Mitchell, 2005). Athletic trainers have a broad range of skills and using these skills benefits the health of the athlete (Mensch et al., 2005). Athletic trainers are the primary liaison between the athlete and the coaches when communicating information regarding medical conditions that affect the athlete's playing status. It is thus important for coaches and ATs to have regular meetings regarding players' injuries and treatment status (Fu et al., 2007). At a Division I level, athletes experience over training and more chronic stress on the body when

compared with athletes at competing in lower divisions. This leads to increased susceptibility to injuries and a greater need for an athletic trainer as it is in his or her scope to handle these situations should they arise (Brooks, 2012). Athletic trainers have the knowledge and training to help athletes adjust to intense competition (Starkey, 2004). It is important that athletic trainers are conscientious about educating their coaching staff regarding their qualifications and responsibilities. This can increase the amount of support provided by the coaching staff and improves athlete performance (Starkey, 2004).

According to Tallia, Lanham, McDaniel, and Crabtree (2006), aspects of mutual relation and respect fuel a healthy working relationship. Based on the concepts of valuing others' opinions and having knowledge of their roles and how they can contribute to the group as a whole, there is a way to analyze coaches' knowledge of the athletic training profession. This exploratory study investigated the experience coaches had with their athletic trainers in an effort to expand upon on their knowledge regarding athletic trainers' roles and responsibilities.

Statement of Problem

The relationship between a coach and an athletic trainer is vital to the success of a sports medicine team, as well as to the maintenance of healthy athletes. Communication is one of the critical components of a successful professional relationship (Fu et al., 2007; Institute for Healthcare Communications [IHC], 2011). Mutual understanding leads to better communication among all parties and contributes to a healthy professional relationship. In athletics, however, there is a general lack of knowledge among coaches

regarding the roles and responsibilities of athletic trainers (Mensch et al., 2005). This becomes a problem when respect is drawn from a mutual understanding between a coach and athletic trainer. Previous research has focused on relationships and communication between athletes, coaches, physicians, and administrators at various less competitive levels, but has not looked specifically at the Division I level. Further investigation into the knowledge of coaches about the roles and responsibilities of ATs at the Division I level is important as the AT-coach relationship at this level of competition is ever more critical given the intensity of play and demand on the athletes (Brooks, 2012).

Statement of Purpose

The goal of this study was to explore coaches' experiences with and knowledge of athletic trainers' and their roles and responsibilities at the NCAA Division I level. The results may not only provide insight into the level of knowledge of coaches about the roles and responsibilities of athletic trainers, but also help determine if coaches are unclear about the services they provide and the benefit that athletic trainers can have on an athletic team (Mensch et al., 2005).

Assumptions

The following assumptions were made in the course of conducting this study:

1. The participants completed this survey with no influence from outside sources.
2. Only the coaches completed the surveys and all were returned.

3. The respondents of the surveys read each question carefully and answered to the best of their ability.

Delimitations

The study was delimited by the following factors:

1. Only NCAA Division I coaches were included in the study. If any other personnel completed the responses, they were eliminated from the survey.
2. Only official coaching staff members were included as participants. No volunteer, student, or graduate student coaches were included.
3. The participants in the study included California NCAA Division I coaches in the Bay Area region of California as defined by the California Department of Social Services in 2002.

Limitations

The following limitations were accepted for this study:

1. The researcher relied upon the participants to answer the questions honestly and to the best of their knowledge.
2. Coaches who were in-season during the period of the study may have been less likely to respond to the survey than coaches who were out of season.
3. The vernacular used in the survey was taken from the NATA's (National Athletic Trainers' Association) Role Delineation Study as well as other medical journals.

Therefore, the wording and language used may have been difficult for participants to comprehend.

4. The e-mail addresses for the coaches were found via university athletics websites. It is possible that these websites did not have the most current information.

Definition of Terms

The following terms are operational definitions for this study:

AT: An abbreviation used in text to replace "certified athletic trainer" when the term is used as a noun (NATA, 2012).

ATC: An abbreviation used to describe the credential of a certified athletic trainer; only used in reference to the credential, not as a noun to replace "certified athletic trainer" when referring to a person (NATA, 2012).

Certified Athletic Trainer: Health care professional, certified by the Athletic Trainers' Board of Certification, who collaborates with physicians to optimize activity and participation of patients and clients (NATA, 2012).

The Board of Certification, Inc. (BOC): provides a certification program for entry-level athletic trainers and reviews the standards for practicing athletic training and continuing education requirements for BOC certified athletic trainers (BOC, 2011).

Chapter 2 Review of the Literature

Sports medicine is an umbrella term that includes the practice of various health care providers and specific disciplines related to allied health. It is described specifically as "an area of health care and special services that applies medical and scientific knowledge to prevent, recognize, assess, manage, and rehabilitate injuries or illnesses related to sport, exercise, or recreational activity…" (Anderson et al., 2004, p. 4). In a school athletics setting, it is impractical to rely on a single person to be an athletic trainer for an entire athletics program at any level; therefore, it is critical that a sports medicine team work together to address the many areas of service provided to athletes. A sports medicine team in the collegiate setting consists of various individuals who manage the health and safety of student-athletes. Members of this team generally include a team physician, certified athletic trainer, a coach and the athlete. While there are potentially other members on a sports medicine team, the ones mentioned above are the most critical (Anderson et al., 2004). The purpose of this literature review is to explain the roles and responsibilities of athletic trainers and to research the level of understanding and perception that athletes and physicians have of ATs. Relevant articles were identified using databases including CINAHL Plus with Full Text, Academic Search Premier, SPORTDiscus with Full Text and Medline. Key words used were: perceptions, athletic trainers, athletic training, knowledge, experiences, Division I setting, athletics, athletes, coaches, administrators, high school, communication, professional relationships, working relationships, roles, responsibilities, qualifications, and education.

This review of literature consists of three sections: (1) defining athletic training; (2) high school coaches' and administrations' perception of athletic trainers; and (3) sports medicine team members' perceptions of athletic trainers.

Defining Athletic Training

Roles and responsibilities of athletic trainers according to the NATA. It is important to have a strong knowledge base about of the profession of athletic training to understand what the research states about current sports medicine team members' knowledge of the roles and responsibilities of athletic trainers. The NATA is the national membership organization for the profession of athletic training whose website provides a detailed description of the qualifications, skills, and services provided by athletic trainers as well as their responsibilities in the delivery of quality health care. The Athletic Trainer Role Delineation Study is a document used to establish clearly defined domains, tasks, and associated knowledge and/or skills necessary to perform the responsibilities of a certified athletic trainer to the standards of the certification. This study has organized these tasks into five domains: (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 (National Athletic Trainers' Association [NATA], 2010).

Athletic trainers are trained to recognize characteristics that predispose an active person to an injury and apply prophylactic/protective equipment to reduce his or her risk

of injury. They are educated in recognizing risk factors in faulty protective equipment and potentially risky environmental conditions. Athletic trainers are taught how to distinguish a potentially dangerous situation, in facility-controlled areas and outdoors and, when necessary, utilize emergency action plans (EAPs). These EAPs are designed to ensure all medical personnel are well practiced and prepared to handle these situations while ensuring the safety of all those present (NATA, 2010).

According to the NATA, athletic trainers are also trained to perform a detailed and comprehensive evaluation of acute, sub-acute, and chronic athletic injuries and common medical conditions. In doing so, they are also responsible for either making a differential diagnosis or recognizing when referral to a more qualified health care professional is necessary. Once a diagnosis is made, a treatment plan is created and the nature of the condition is communicated to the patient and other health care personnel. Emergency care is another area in which athletic trainers are educated. They are trained in primary assessments and life-threatening conditions as well as secondary assessments and proper management of non-life threatening conditions (NATA, 2010).

Beyond evaluation, athletic trainers are skilled in various types of techniques for treatment and rehabilitation that can be performed on the field, in a clinic, or in an athletic training room. These therapeutic and rehabilitative interventions may be applied post-surgically, post-injury, or as a method of prevention, and may include various modalities and treatment techniques or exercises to improve function, strength, and endurance. These rehabilitative interventions can be designed as long term programs for

more severe injuries if needed. Potential stress levels and psychological strain are taken into account as these programs are appropriately designed for the athlete's specific condition. Athletic trainers also have the proper training to fit braces and assistive devices to facilitate recovery, assess the patient's functional status, and determine whether or not the person is able to return to play or activity at full function (NATA, 2010).

There are numerous responsibilities athletic trainers have outside of treating athletes. They possess skills to manage a health care facility appropriately and within the legal limits set forth by the Occupational Safety and Health Administration, Health Insurance Portability and Accountability Act, and Federal Education Rights Privacy Act. Athletic trainers are responsible for maintaining and safely storing medical records and insurance information in a way that meets legal and regulatory standards. Furthermore, according to the NATA, athletic trainers have the knowledge and experience to manage a budget in accordance with a needs-based assessment for a facility or program (NATA, 2010).

Educational and experiential background of athletic trainers. Currently, over 70% of certified athletic trainers hold a master's degree, but before achieving a master's degree a person must first complete the initial educational and certification process required to become an athletic trainer (NATA, 2012). In order to become a certified athletic trainer, a person must first graduate with a minimum of a bachelor's degree from an Athletic Training Education Program (ATEP), which must be accredited by the

Commission on Accreditation of Athletic Training Education (CAATE). This is the agency responsible for the accreditation of all professional entry-level athletic training education programs (BOC, 2011).

These programs involve classes from multiple disciplines in the basic and applied sciences including chemistry, physics, anatomy, physiology, biomechanics, and statistics. Along with these courses, they are required to complete a set of athletic training specific courses that address each of the domains of athletic training as identified by the NATA. Outside of the classroom, each athletic training student is required to complete a minimum of 2-3 years of clinical education (fieldwork) where he or she gains clinical experiences with a variety of patient populations under the supervision of an approved clinical instructor (i.e., a certified athletic trainer or other credentialed allied health care professional) (NATA, 2009).

Upon completion of the bachelor's degree and the approval of the program director, students can take the Board of Certification exam. This certification exam is recognized by the National Commission for Certifying Agencies and is the only certification exam for athletic trainers in the country. This exam encompasses each specific domain of athletic training. Upon passing, it ensures that the student is competent in applying his or her athletic training skills and has the knowledge, decision-making skills, and specific performance abilities within each of the five domains (NATA, 2009). After passing the BOC exam, athletic trainers are responsible for earning continuing education units (CEUs) to demonstrate that they are staying current with the

knowledge in the field (Board of Certification, Inc., 2011).

Communication within a Sports Medicine Team

As one of the primary members of the sports medicine team, it is the athletic trainer's responsibility to relay all necessary information to the other members of the team. One of the most important members of this team is the athlete's coaches, with whom an athletic trainer communicates the most. The communication between the coaches and AT may not be specifically mentioned in the definition of athletic training, but it is an important component in how athletic trainers promote healthy return to play for their athletes (Hayden & Lynch 2011). Athletic trainers are an important resource for coaches, as they can help identify the psychological aspects of an injury's recovery process and the emotional components that can affect return to play. Communicating their suggestions definitively and having a patient mindset is critical when working closely with coaches to assist an athlete in the late stages of the rehabilitation process. Many coaches are unfamiliar with rehabilitation protocol standards and their immediate goals may be different from that of an athletic trainer (Hayden et al., 2011). While it is the primary job of the coaches to help the team win games and become better competitors, it is the athletic trainers' job to ensure the safety and health of the athletes. Although, it is important that athletic trainers understand that coaches might not always utilize their suggestions regardless of how pertinent and potentially effective they may be (Hayden et al., 2011). Athletic trainers are unique in that they are qualified to make

recommendations to coaches regarding the most effective way for athletes to return to high-intensity training and competition (Hayden et al., 2011).

Assisting an athlete in his or her return to sport specific play is where the AT and coach are able to help each other in their ultimate goal of returning the athlete to full, functional participation. Athletic trainers are a valuable source for coaches when the time comes in the rehabilitative process to engage an athlete into sport training and eventually competition. The appropriate level of training will be set forth by the athletic trainer based on an accurate assessment of the athletes' current abilities, needs, and limitations. Athletic trainers are qualified to make this decision because of their specific knowledge of injury characteristics and healing patterns. They help coaches to design and modify sport specific training techniques as well as realistic performance expectations that will help the athlete gain confidence (Hayden et al., 2011).

According to Massachusetts General Hospital Department of Orthopedics, physicians recommend that athletes with long term injuries receive therapy from an AT anywhere from five to seven days per week to ensure the quickest recovery, especially from more severe injuries that require surgery. This could potentially amount to five to fifteen hours per week spent with a single athlete (Massachusetts General Hospital: Department of Orthopedics, 2013). The extended amount of personal contact time between the athlete and the athletic trainer provides an opportunity to bond and create a trustworthy relationship. Athletic trainers can share significantly helpful physical and psychological information with coaches regarding the progression of the athlete through

the rehab process. "An optimal relationship between ATs and coaches allows them to use their respective expertise to guide athletes back to health and pre-injury athletic performance capabilities. This relationship can create an environment that fulfills injured athletes' need for competence" (Hayden et al., 2011, p.25). Healthy communication can contribute to an effective and smooth transition as the athlete goes from participation in rehabilitation exercises to sport specific training and eventually achieving full participation. Furthermore, ATs can help coaches communicate effectively with their athletes by providing helpful information regarding the athletes' mental and emotional states that may have been gathered during the treatment or rehabilitation sessions

In basic medical care outside of the athletic population, research indicates that there is a strong positive correlation between a healthcare team member's quality communication skills and a patient's complacency to follow through with medical recommendations (IHC, 2011). This correlation can be applied to the relationship between an athletic trainer and his or her athlete. Recent studies have shown that a clinician's ability to not only communicate effectively with a patient, but also to listen and empathize with that patient has a considerable effect on health outcomes and patient care satisfaction. A patient perceives quality healthcare based upon the quality of the interactions with his or her health care clinician(s) (IHC, 2011). "The connection that a patient feels with his or her clinician can ultimately improve their health mediated through participation in their care, adherence to treatment, and patient self-management" (IHC, 2011, p. 1). This is also applied to the athletic community. An athlete perceives

quality care based on their interactions with their athletic trainer and sports medicine team while treating an injury.

Patient satisfaction is contingent on many factors, including communication. Communication involves not just basic person-to-person interaction. In the patient's eyes, communication means that he or she feels like their concerns are being taken into consideration by the healthcare team. Good communication is shown when information is explained clearly and the clinician makes a sincere effort to understand the patient's experience. In addition, when the clinician provides all viable options for the patient based on the situation, he or she is allowing them to feel some control and make their own decisions, both of which are important to achieve patient satisfaction (IHC, 2011). All of these aspects of patient satisfaction and positive healthcare communication can be applied to the athletic community. Athletic trainers, though they are not physicians or physical therapists, are allied health care professionals and the athletes are their patients. It is essential that athletic trainers act and communicate as any other health care professional would toward his or her patient, thereby improving their relationship with the athlete and subsequently the athlete's adherence to treatment.

High School Coaches' and Administrations' Perception of Athletic Trainers

Based on their personal experiences as a coach and as an athlete, coaches will have developed their own perceptions and ideas of what it means to be a certified athletic trainer as well as what they may expect from their athletic trainer. It is also likely that

coaches will have differing expectations of their ATs depending on what time of year it is in relation to the season; for example, preseason, postseason, or in season (Mensch et al., 2005). In a study by Mensch et al., (2005), perspectives of athletic trainers were compared in the high school setting. Using a semi-structured interview protocol, 20 coaches and their respective 10 ATs were interviewed to gain information about the relationship between these coaches and ATs. The objective of this research was to "explore and contrast perspectives of coaches and ATCs toward the ATCs' role in the high school setting" (Mensch et al., 2005, p. 334). There were three main questions that the researchers hoped to answer with the results: (1) What are coaches' expectations of ATs during the different phases of a basketball season?; (2) What do ATs perceive their role to be during the different phases of the season?; and (3) How do the coaches' expectations compare with the expectations of the ATs? (Mensch et al., 2005).

Mensch et al., (2005), finalized 12 questions for the interviews of the coaching staff. They were designed to explore the athletic training services provided to the teams of the high school basketball coaches, the expectations of their athletic trainer during different phases of the season, and the level of satisfaction they had with their current athletic trainer. The interview guide for the athletic trainers consisted of 17 questions, covering three major areas: basic background of the athletic trainer, ATs' perception of their own responsibilities during the various phases of the basketball season, and other factors in the workplace (school) that enhanced or hindered their ability to do their job (Mensch et al., 2005).

Mensch et al., (2005) also found that nine out of the 10 athletic trainers worked at their high school in conjunction with a job at a clinic, where their direct supervisor was the director of the clinic, not a school administrator. Half of the ATs held credentials or certifications in addition to being a certified athletic trainer, i.e. a master's degree, a certification in strength and conditioning, or a physical therapy license. Out of the 20 coaches in the study, only 10 were aware of their athletic trainer's direct supervisor and of the 10 that were unaware, two of them incorrectly identified themselves as the athletic trainer's direct supervisor. Eleven coaches were not aware of the ATs' credentials, nor did they know the athletic trainer was NATA-BOC certified (even though this is a required credential). When asked about his athletic trainer's credentials, one coach said, "I don't really know to be frank with you. What I look at basically is whether they are getting the job done and seem pretty knowledgeable in what they are doing" (Mensch et al. 2005, p, 336) Based on his response, this coach showed that he was not particularly interested in the credentials of his athletic trainers; simply that they "looked" as though they were doing their job.

The expectations coaches have of ATs in the off-season did not differ a great deal from their expectations during preseason, according to Mensch et al., (2005). Coaches clearly explained that they wanted their athletic trainer to simply be available to the athletes when needed. Some stated that they would prefer if the AT was within the vicinity of the school so as to be easily accessed by the athletes in person or by telephone if the coaches had any questions or comments regarding an injury or an athlete. The coaches were able to better articulate desired roles and responsibilities of their athletic

trainer during the season. However, it is clear that these coaches were not aware of the full extent of their athletic trainers' capabilities. Most of the coaches explained that the athletic trainer would be responsible for taping, stretching, or taking care of any injuries before and after practices or games. During games, the athletic trainer remained on the bench in case of an injury or to address any other issue as needed. Nine of the 20 coaches interviewed stated that they were completely satisfied with the current services provided by their athletic trainer and could not think of any other services they could provide to better care for the athletes (Mensch et al., 2005). In addition, all coaches were more than satisfied with their athletic trainer's respect toward the program and agreed on the level of importance of having a good professional, working relationship with their athletic trainer (Mensch et al., 2005).

Comparing answers given by the coaches and the athletic trainers, as expected, the athletic trainers provided a much more detailed description of their responsibilities during all phases of the basketball season. In the off-season and preseason, the athletic trainers described some of their duties as implementing conditioning programs for the athletes as well as rehabilitation programs for those who are injured. The ATs identified themselves as responsible for helping the coaches maintain the physical fitness of athletes who are not involved in another sport. During the season, the main tasks they identified were similar but not limited to the tasks that the coaches mentioned: taping, stretching, and pre-game treatment of any injuries. One athletic trainer also noted additional expectations that he considered to be important. These included, "Acting as a liaison for the athletic department…when other schools get there. I try to meet them and make sure

they have access to water and ice if they need to do that. I also make sure I introduce myself to the coaching staff of the other team" (Mensch et al., 2005, p. 337). The ATs also spoke of communication with parents and guardians as one of their main responsibilities. This communication pertained to any injury or illness that happened during a game or practice, and would educate the guardian on the nature of the issue and how to care for it at home. All 10 ATs also explained the importance of a good working relationship with their coach as well as being very satisfied with the current professional relationship (Mensch et al., 2005).

The minimal expectations during the offseason and preseason and the limited expectations while in season highlight the limited knowledge that the coaches had about the qualifications and capabilities of certified athletic trainers. This may be due to the lack of personal experience that these coaches had working in a high school setting with an athletic trainer available. Coaches who have the opportunity to have more personal experiences with competent athletic trainers on a consistent basis may be more informed about the skills and services that athletic trainers can offer the athletic population (Mensch et al., 2005).

From the analysis of the data from Mensch et al., (2005), three significant themes emerged. First, coaches had limited knowledge of the experience and qualifications of their athletic trainer and were willing to work with whomever they were provided. Second, each coach expressed a genuine desire to have an athletic trainer available but found it difficult to explain any specific duties in detail in even a similar way to the ATs. Third, communication, according to both the AT and the coach, was the most important

aspect to a good functional relationship between the coach and the athletic trainer (Starkey, 2004). While these conclusions are clearly demonstrated by the data, due to the fact that the subjects were limited to coaches and athletic trainers in the high school setting, these results cannot be assumed to be accurate for all levels of athletics. Additionally, the coaches and athletic trainers were that of only basketball teams and cannot be used to make generalizations about all coaches and athletic trainers for all sports.

In a high school setting, members of the sports medicine team, such as the athletic director and administrator, are involved in forming a team using their affiliation with an athletic trainer. In a study reviewed by Starkey (2004), 219 high school administrators were surveyed and the majority (>70%) agreed with the statement that "athletic trainers conduct injury rehabilitation, and organization and administration of athletic health care" (Starkey, 2004, p. 21). These administrators also agreed that the profession of athletic training is highly misunderstood in terms of certified athletic trainers' scope of practice and that this lack of knowledge among high school administrators negatively affects these programs as they try to form an adequate medical staff, specifically in the care of athletes. These investigations are a clear indication that in high schools without an athletic trainer, the administrators need to gain more knowledge regarding the role of a certified athletic trainer in injury prevention and treatment (Starkey, 2004).

In a study by Ray (1987), Michigan high school superintendents were surveyed about their knowledge and attitudes toward athletic injuries and athletic trainers. The

motivation behind this study was a growing concern by athletic trainers about whether or not high school students, especially athletes, were receiving quality health care. At the high school level, administrative positions, such as superintendents, are commonly in good positions to facilitate the implementation of policies within the athletic department, and their experience in the educational setting helps them to understand attitudes held by others about their educational settings as they relate to health care.

In a study by Ray, (1987), a survey asked that the subjects rank six athletic trainer job functions from most important to least important. When compared to the Role Delineation Study of the Entry Level Athletic Trainer, the subjects were correct on all but one level where most placed education/counseling as more important than organization/administration. While the vast majority of superintendents had heard of the athletic training profession and had also had personal contact with an AT, only 15% of those superintendents responded saying they did employ an athletic trainer in their appropriate school district (Ray, 1987). This last piece, however, contrasts greatly with two other studies in that only 20 high schools in Michigan had a certified athletic trainer and there was only one AT for every 5,500 athletes (Ray, 1987). This skewed perception of the volume of athletic trainers in the high schools was potentially caused by the presence of non-certified "athletic trainers," student interns from other curricula, or certified athletic trainers based out of a sports medicine clinic providing outreach services to area high schools. Future public awareness programs would be beneficial if implemented and directed toward athletics administrators and coaches to prevent this misconception from continuing (Ray, 1987).

Regardless of the number of years since this study was completed, it is still relevant in this area of research. The results clearly state that the misconception of the volume of athletic trainers in a high school could be potentially due to the number of non-certified "athletic trainers." Currently in California, there is no licensure requirement for the profession of athletic training which means that there are still non-certified (and uneducated) "athletic trainers" acting as certified athletic trainers. This not only presents a potential danger to the people to whom they are providing services but can also cause people to misconstrue the profession as a whole.

The common factor between the above studies is that they were all conducted at the high school level. These studies, though not the same level of competition as the population in the current study, still relate to the perceptions coaches have of athletic trainers at the Division I level. While the level of competition in Division I sports, among other factors, is significantly different than what is experienced in high school sports, at both levels, providing care and proper health services to the athletes is a priority. Providing effective services that meet the needs of the athletes requires clear communication and understanding between coaches, administrators, athletic trainers, and athletes; this includes having a clear understanding of their respective roles and responsibilities.

Sports Medicine Team Members' Perceptions of Athletic Trainers

A team physician, orthopedic surgeon, and athlete are among the core of a sports medicine team. While it is critical that each member of the sports medicine team understands the duties of his or her fellow team members, few scholarly research studies have examined each member's perception of one another (Anderson et al., 2004). In a study by Unruh (1998), athletes' perceptions of athletic trainers were assessed in terms of their satisfaction with the services received. Similarly, in a study by Storch, Stevens, & Allen (2007), orthopedic surgeons were questioned regarding their own perceptions of athletic trainers as physician extenders. Neither of these articles went into detail about the athletes' or physicians' understanding of the roles and responsibilities of the athletic trainer; rather they only addressed the level of approval of the services received in each position.

Athletes' perceptions of athletic trainers. The relationship between an athlete and his or her athletic trainer is of fundamental importance when conducting activities associated with an injury. The rapport an athletic trainer builds with an athlete can facilitate the process of providing medical services to the athlete. Trust is a vital component in the relationship between these two members of the sports medicine team (Unruh, 1998). The purpose of Unruh's (1998) study was to examine the level of satisfaction different subgroups of athletes expressed about the delivery of medical services by their athletic trainer. This study showed different perceptions of how well the athletic trainer did his or her job. Two athletes from each male and female sport were

selected randomly from the roster at 12 collegiate Division I and II institutions. The Role Delineation Study formulated by the NATA was used to formulate questions eliciting responses of how well the athlete perceived the athletic trainer to do that specific aspect of his or her job (Unruh, 1998). The Role Delineation Study defines the basic knowledge and skills that are necessary in order to practice Athletic Training (NATA, 2010). Athletes were placed in gender- and sport-based subgroups. Those who competed in football, basketball, baseball, and women's basketball were classified as participating in high-profile sports while others, such as volleyball, swimming, softball, were considered low-profile sports (Unruh 1998).

In the study by Unruh, (1998), female athletes in low-profile sports had a lower mean perception score, which means that they perceived their athletic trainers less favorably than did the athletes in the other subgroups. Additionally, females in a low-profile sport in a Division II setting had the lowest cumulative average score. Females in low-profile sports in both a Division I and II setting as well as males in a low-profile sport in the Division II setting had a significantly less favorable perception of their athletic trainers. It is possible that athletic trainers do not demonstrate the same level of care to athletes at all levels and sports and do not put the same emphasis on the medical services they provide to each individual athlete (Unruh, 1998). Additional research is needed to investigate whether athletic trainers are spending more time providing athletic training services to high-profile sports and, if so, examining the reasons behind these actions. While athletic trainers are expected to provide the same level of health care to

all athletes, according to Unruh (1998) there is perhaps some difference in the level of care based on the varying levels of athlete satisfaction with athletic trainers.

According to Fu et al. (2007), an athlete's positive perception of his or her own athletic trainer has the potential to place the AT in a position of advocacy and support for the athlete. With this relationship comes the duty of being the primary liaison between the medical staff and the coaches. Effective communication and integrity are some of the most vital traits that an athletic trainer can hold (Raab et al., 2011). By nourishing an honest and communicative relationship with the athlete, an athletic trainer will have a healthier and more open relationship with the coach. The athlete's confidence in the athletic trainer can lead to a coach's inherent confidence in his or her team's athletic trainer (Fu et al., 2007).

For an athletic trainer, building a positive relationship with the athlete can create an environment the athlete can trust and depend upon. By communicating effectively, the relationship that is built between the athlete and certified athletic trainer can lead to positive clinical results, such as adherence to rehabilitation (Spangler, Blankenship, Leverenz, & Templin, 2008). In order to employ the best method of communication, it is imperative to find out how "effective communication" is perceived among athletic trainers and athletes. This knowledge will not only improve the communication between the two most critical persons in an athletes' recovery from injury, the athlete and his or her athletic trainer, but also indirectly improve the quality of the relationship between them (Spangler et al., 2008).

In a study completed by Spangler et al., (2008), ten certified athletic trainers and ten athletes from one NCAA Division I university were interviewed using a semi-structured interview that consisted of various questions about effective communication, the role of physical contact, and how gender disparity effects the relationship between ATs and athletes. The next section presents findings that provide some insight on each group's perception of effective and ineffective communication.

Results showed various common themes among the athletes and the athletic trainers. Two important reoccurring themes between both groups was the importance of developing personal relationship and the aspects that are involved in a personal relationship. The aspects of the personal relationship primarily involved aspects of trust, building rapport, and conversation (Spangler et al., 2008). According to the athletes, athletic trainers who clearly explain the intricacies of the evaluation and rehabilitation process to the athlete are more effective because it makes the athlete more aware of the athletic trainers goals and the processes they use to reach those goals. Emotional support, especially through positive feedback and encouragement, is an important dimension to the effectiveness of an AT (Spangler et al., 2008).

Apart from the development of a personal relationship, Spangler et al., (2008), said that the majority of athletes also stated that is it important that athletic trainers maintain a sense of professionalism. Athletic trainers were specific in the kinds of activities that could be described as professional, for example, reliability, confidence, helpfulness, respect, and being willing to admit their mistakes while the athletes simply

stated the importance of "acting professionally." Athletes were unable to provide a specific in their definition of professionalism but one student mentioned that while spending time in the athletic training room, he also tries to stay professional so as to not put the AT in an uncomfortable situation or put their position in jeopardy (Spangler et al., 2008).

Orthopedic surgeons' perceptions of athletic trainers. The team physician and/or orthopedic surgeon are also seen as key members of a sports medicine staff. The relationship between athletic trainers and orthopedic surgeons has been growing consistently over the past decade (Storch et al., 2007). Because of the services that athletic trainers provide, they are increasingly being hired as physician extenders. Athletic trainers have the potential to contribute to the orthopedic setting as physician extenders because of their knowledge of athletic injuries and the rehabilitation process. In a study completed by Storch et al., (2007), 101 orthopedic surgeons responded to a mailed survey. The survey utilized the scope of practice of three different professionals; a nurse practitioner, a physician's assistant, and an athletic trainer. The respondents were asked to check each of the tasks that they felt each profession was qualified to perform. Results indicated that 44% of respondents said they would hire an athletic trainer as a physician extender and those surgeons who had a more accurate perception of athletic trainers were more willing to hire them. Fully understanding the qualifications of athletic trainers could lead to more effective use of their services.. The importance of building a working relationship between athletic trainers and team physicians has grown significantly in recent years, especially in intercollegiate and professional athletics

(Winterstein, 2010). The implications for educating team doctors and coaches about the profession of athletic training have thus become even more important to ensuring athletic trainers' expertise are utilized to their fullest potential.

Dance program administrators' perceptions of athletic trainers. Although certified athletic trainers are most known for their work in the athletic setting, over half of athletic trainers work outside of the realm of athletics (NATA, 2011a). Dancers are highly active individuals who endure years of intense training that is physically demanding on the body (Ambegaonkar & Caswell 2009). While these types of physical stressors are similar to those experienced by athletes on sports teams, little attention is paid to the unique type of health care from which these dancers could benefit. Over recent years, the dance community has noticed the lack of sufficient care; thus, dance company directors and collegiate program directors have begun to seek out proper health care for these artistic athletes. These movements do not, however, include collegiate students enrolled in dance programs, which could potentially include up to 37% of the dance population in the United States. Over 175 universities in the US include dance programs and none of them provide on-site access to dance specific medicine services. This has been an emerging area of practice for athletic trainers. Ambegaonkar et al., (2009) researched the availability of on-site dance medicine services to college dance programs and documented the perceptions of program administrators about the need for such care.

Fifty-six institutions were identified by Ambegaonkar et al., (2009), for having an Athletic Training Education Program as well as a dance program as part of their curricula. A four-section survey collected information regarding demographic information, curriculum information, documentation of possible components of on-site dance medicine services, and administrators' perceptions regarding the availability and need for specialized services (Ambegaonkar et al., 2009). Of the 175 surveys that were sent out, 24 were returned. Fifteen program administrators indicated that on-site dance medicine services are available through the student health center at their respective institutions. Six respondents indicated that services were provided through the schools' intercollegiate athletics, and three reported that services were provided by an externally contracted agency. As indicated on the surveys, the "health care professionals" who were providing services to these dancers were reported to be physicians (9), nurse practitioners (9), athletic trainers (6), physical therapists (4), massage therapists (3), and Pilates instructors (8). Institutions that have an Athletic Training Education Program could receive great benefit from working closely with dancers. Their unique activity, dancing, provides a setting in which athletic training students can learn about a more diverse patient population, however only six dance programs reported having ever been treated by an athletic trainer. All of the participants stated that they "strongly agree" that dance students need health care and there is strong support for the implementation of athletic training services into the health care for universities that have dance programs in their curricula (Ambegaonkar et al., 2009).

There are significant voids in the current research regarding perceptions of athletic trainers especially at the higher, more competitive levels of athletics. While there are copious amounts of research on coaches' and administrators' perceptions of athletic trainers in the high school setting, there is no research on these staff members' perceptions of athletic trainers at the more competitive levels (Division I or professional). The most important relationship an athletic trainer must develop is the one with his or her own athlete. There are various studies that examine the relationship between these two critical members of the sports medicine team. The current research has repeating themes that express the need for an athletic trainer in the athletic community and the idea that while underutilized the assistance of a certified athletic trainer in the athletic population would be of great benefit. In addition, there is a lack of understanding among those who work closely with athletic trainers about the roles, responsibilities, level of education, and experience of athletic trainers. While participants in many of the studies were not able to describe many specific duties an athletic trainer performs, they were persistent in their support of the services athletic trainers provide. This could be due to various reasons, possibly having to do with the amount of publicity following the profession of athletic training or the lack of education among those people who work most closely with ATs. Apart from the athlete, the coach is the member of the sports medicine team that the athletic trainer will communicate most with regarding the current status of the team and specific athletes (Hayden & Lynch, 2011). More research is necessary to look into coaches' perceptions and knowledge of athletic trainers at the more competitive level.

This study addressed a large gap in the current research, as it examined how athletic trainers are viewed specifically by Division I coaches, a population that has not been investigated with regard to this issue. The methodology of this study is similar in design to previous research that examined perceptions of athletic training responsibilities. It used a survey as well as open-ended questions for answers with more depth and meaning.

Chapter 3 Methodology

Qualitative Research and Kinesiology

This study examined perceptions within the athletic training profession. It also examined the knowledge of coaches about the educational background and scope of practice of athletic trainers. Qualitative methods, including a descriptive survey and interviews, were used. Semi-structured interviews were employed to elicit detailed responses, allowing the interviewee to respond to the questions and probes in depth (Berg, 2004). In addition, analyzing the data involved an interpretive approach, which is highly emphasized in qualitative research methods. By utilizing interviews, I was directly involved in the responses of the participant, which allowed me to better interpret their meanings (Denzin & Lincoln, 2003).

Historically, research in Kinesiology has been commonly associated with the scientific method. The scientific method, while forming a set of guidelines on how research "should" be done, forced this subdiscipline to align itself with the post-positivist paradigms where numbers and statistics were tied to legitimacy and were a sign of doing good work. In the eyes of those who strictly follow this kind of research, using this concrete method creates objectivity because the researcher and participants are kept separate, which also allows the elimination of potential bias (Creswell, 2007). In the post-positivist paradigm, researchers who lean toward qualitative research tend to design their methods to resemble the quantitative approach with series of logical steps that lead into one another (Creswell, 2007).

Qualitative researchers are more commonly associated with the interpretive paradigm, which focuses more so on the meaning of answers as opposed to concrete data (Creswell, 2007); the epistemological assumption is that the world is not all based on biology and reality is socially constructed. Based on this understanding of reality, to gain knowledge about aspects of the world, one must also become personally involved with that which is not understood, as it is what creates meaning, and thus, knowledge. When designing a methodology that can satisfy the characteristics of the interpretive paradigm, there needs to be flexibility and room for growth within the design (Creswell, 2007). Therefore, this study utilizes a methodology that emphasizes highly qualitative research via interviews.

The purpose of this study was to highlight the experience of the coaches and knowledge of coaches about the roles and responsibilities of ATs in the Division I setting. This study employed the use of a descriptive survey and follow-up phone interviews. The use of multiple methods allowed the research question to be approached from multiple directions in order to provide very detailed and personalized research (Smith & Sparks, 2005).

Participants

All official head coaches of NCAA Division I universities in the Bay Area region of California were recruited to participate in this study. The Research and Development Division of the California Department of Social Services designed a map and made recommendations for regional studies done in the state of California. This study utilizes

the Division I NCAA universities in the Bay Area region. NCAA Division I universities have specific requirements that they must meet in order to maintain their Division I status. Each of these schools is required to sponsor a minimum of 14 varsity sports or 16 sports if they have football. The student-athletes that participate in Division I athletics make up 35% of the total number of student-athletes participating at NCAA institutions (NCAA, 2013). I chose Division I athletics as the target population based on convenience, as the study was being conducted on the west coast of the United States.

Roughly 10% return was expected from this population (Baumgartner & Hensley, 2006). Not included in the population were staff members such as, assistant coaches, graduate assistants, volunteers, student assistants, or coaches of intramural teams. Based on the concept of purposive sampling, this population was chosen because of the involvement of these coaches at a higher level of athletics. While there is research on the perceptions coaches have of athletic trainers at the high school level, as well as other medical professionals' perceptions of athletic trainers, there is a lack of research at the more competitive level of Division I athletics (Baumgartner & Hensley, 2006). The research on coaches' knowledge of the roles and responsibilities of athletic trainers is scarce, and furthermore, no research was uncovered specifically on the knowledge and perceptions of Division I coaches. This study focuses on coaches at the Division I collegiate athletics level to address this gap in the research.

Instrumentation

There were multiple parts to the methodology of this study. The initial data collection method utilized a questionnaire. This questionnaire was written and designed by the primary researcher using the input of other certified athletic trainers. The survey method was optimal for collecting data because the sample is widely spread geographically and cannot be brought together as a group (Baumgartner & Hensley, 2006). Surveys are a valuable method when obtaining information concerning opinions or basic knowledge from a large group of people. In addition, survey methodology is not commonly used as the only method of data collection. It is suggested that, in addition to surveys, researchers use alternate methods to ensure that the data collected contains as much depth as possible (Baumgartner & Hensley, 2006). The survey was designed using Qualtrics Survey Software and distributed to the participants via e-mail. A cover letter explaining the rationale and importance was sent with the survey.

The goal of the study's first round of data collection was to obtain information regarding the demographics of the participants as well as the basic coaching background and level of experience each participant had had with an athletic trainer. The second section asked questions that aimed to determine the level of knowledge coaches had about the profession of athletic training and scope of practice of an athletic trainer. This was the most critical section of the survey and utilized the five domains of athletic training designated by the Athletic Trainer Role Delineation Study (NATA, 2011b). This portion was multiple choice and asked that the participant mark any and all of the specific duties that he or she understood to be within the scope of practice of an athletic trainer.

Under each domain there were various tasks that athletic trainers perform under their designated scope of practice. Also included among the responses were tasks and duties that athletic trainers are not able to perform, tasks that are more suited for other sports medicine team members, such as a team physician or paramedic. These tasks could be misconstrued to be under the scope of practice of an athletic trainer because an athletic trainer may assist in these tasks.

The survey questions were specifically designed and chosen for this study because of the very specific data the researchers were attempting to uncover. The research about this topic indicated that positive working relationships are fueled by effective communication and understanding of each other's roles. The questions in this survey were chosen because they specifically asked the participants to reveal the amount of experience they had working with an athletic trainer as a coach and, in addition, they were asked to reveal how often they communicated with their respective athletic trainers on a weekly basis. The answers to these survey questions could expose a connection between the amount of experience and communication the coaches had with ATs and their knowledge regarding the roles, responsibilities and qualifications of athletic trainers.

The final two questions of the survey were open-ended and asked the participants to briefly describe any positive or negative experiences they had while working with an athletic trainer. When the surveys were submitted via the internet, the primary researcher received them and began the process of determining who expressed willingness to participate in follow-up interviews. Each participant had the option to give consent to participate in a follow-up interview at the end of the survey along with the most

appropriate contact email address. If consent was not provided at the time of the survey, the participant was not asked for a phone interview. According to Berg (2004), this study lent best toward interviewing over the phone because of the geographical distances as well as the use of a semi-structured interview guide (Berg, 2004). The primary researcher analyzed the responses by hand, as suggested by Baumgartner & Hensley (2006). Interviews were held over the phone, transcribed, and coded by myself, the primary researcher. The coding method was based on the responses received from the participants. Patterns were analyzed and each participant's responses were organized into these themes (Taylor & Bogdan, 1998).

Procedures

The survey was sent to each of the coaches' e-mail addresses provided by the institutions' athletics website via the Qualtrics Software. The e-mail contained the cover letter and a link that took each participant to the survey. Each participant was informed that by entering the survey they were also consenting that their responses may be used in the study for which the survey was intended. Each week after the initial e-mail, participants received reminder e-mails to participate in the survey. By using this method, return rate of the surveys was increased (Baumgartner & Hensley, 2006). Participants had a total of three weeks to complete and submit the survey via the Qualtrics Software (Baumgartner & Hensley, 2006). After three weeks, the survey was closed and no additional submissions were used as data. As each survey was submitted, it was given an identification number. This kept the participants information confidential and assisted in

the process of analyzing the data using computer software. Phone interviews began after the initial data was collected and it was determined who was contacted for a brief, additional phone interview.

Data Analysis

The survey portion of the data was compiled and analyzed using the analysis portion of the Qualtrics software. Frequencies were used to assess the responses to the initial 15 multiple-choice questions. The first ten questions collected information about participant demographics and perceived educational background of athletic trainers. The final five questions requested information on the competencies within each domain of athletic training. In order to assess the open-ended questions, themes were constructed based on participant responses. The two open-ended questions asked were about positive and negative experiences the coaches had with athletic trainers.

Based on the survey questions and the willingness of the participant, additional phone interviews were conducted in order to elaborate on the answers provided in the survey. I used a semi-structured interview guide as a framework for the phone interviews and for initial analysis process. This interview guide also allowed the larger themes to stand out. I transcribed the responses from these phone interviews and read through the transcriptions multiple times as to not miss any minor details that could've provided better understanding of the responses. While readings the transcriptions, I made notes about common themes and topics I found in the data (Taylor & Bogdan, 1975). I coded these common themes within the data by highlighting the phrases and paragraphs that

pertained to each theme. There were four themes and each was assigned a different color highlighter in order to organize the codes within the data. The phrases or paragraphs that were pertinent to a theme were highlighted in their respective color. Once I coded all data using this method I resorted the data according to each of their themes and examined it further to find common topics within each of these larger themes. These common topics and patterns were identified using a secondary coding method (Taylor & Bogdan, 1975). Similar responses were brought together within each larger theme in order to capture a deeper substance and more specific meaning to each theme (Taylor & Bogdan, 1998).

Chapter 4 Results

Survey Responses

The participants in this study included NCAA Division I head coaches in the Bay Area region of California. This section will present descriptive statistics investigating the relationship between coaches and athletic trainers as well as knowledge of the coaches of athletic trainers' certification requirements, educational background, and scope of practice. Of the 144 coaches who received the survey, 31 participants responded (22%). Universities, colleges, and sport associations were kept confidential so as to not risk linking responses to the coaches' identity. All who responded confirmed their awareness that they have an athletic trainer working with their current team. All of the coaches indicated that they communicate with their athletic trainer about professionally related topics at least once a week, and nearly 60% (*n*=18) of coaches said they communicate with their athletic trainer on a professional level over five times per week (Table 1). Regarding the educational background of athletic trainers, over half (*n*=16) of the participants correctly identified a bachelor's degree as the minimum requirement for athletic trainers. Over 40% (*n*=14) were under the impression that a master's degree was required while only 3% (*n*=1) thought that no college degree was required (Table 2). The vast majority (94%, *n*=29) of the respondents were correct in identifying that athletic training students were required to complete and show evidence of clinical hours of experience (Table 3). Over 60% (*n*=20) of the participants acknowledged that athletic trainers are required to pass a national board exam and go through a certification process before becoming certified (Table 4). With regard to the final survey questions, nearly

60% of the participants correctly identified all of the competencies under each domain of the athletic training profession. In addition, the competencies that are not under the scope of an athletic trainer were left unmarked by over 50% of the survey participants, indicating their knowledge that these competencies fall under that of different medical professional (See tables five through nine in Appendix D).

Phone Interviews

Of the 31 participants who responded to the survey, four coaches were contacted for follow-up interviews. Coaches were chosen for follow-up interviews if they expressed willingness to participate, provided their email addresses for additional contact, and continued to express willingness after being contacted. Of the four participants, three were males and one was female and all four were between the ages of 41 and 60. The results of the follow-up interviews are organized into four higher order themes found within the data. These four themes include: qualities of the relationship between the athletic trainer and the coach, coaches' desired personality traits of an athletic trainer, qualities of the athletic trainer as a professional, and causes of conflict between the athletic trainer and coach. Inside of these four themes, various subthemes were created and identified so that the data could be further dissected and analyzed.

Qualities of the relationship between the coach and the athletic trainer. Most coaches who participated in the follow-up phone interviews had similar opinions on what constitutes a quality professional relationship between coaches and their athletic trainer. Research indicates that the most important qualities that make up a professional

relationship are healthy communication, a mutual understanding and comprehension of each other's profession, and acceptance of one another's roles and responsibilities as they pertain to the athletic team (Fu et al., 2007 & IHC, 2011).

The coach and athletic trainer staying on the same page. Coaches emphasized being on the "same page" with their athletic trainer in terms of the message they are sending to the athletes. One coach stated, "anytime you send a double message to the athletes, [they] can see a way to manipulate the system." This coach had an experience where his athletic trainer expressed an opinion about the amount of running that the athletes were doing at practice, implying that it was too much. Because the opinions of the coach and athletic trainer differed and the athletes were made privy to these differing opinions, it caused discourse among the athletes and staff members. The athletes used the athletic trainer's opinion as an argument against the coaches to try and negotiate less running at practice. Another coach emphasized the importance of approaching the coach directly if there is an issue or a question and not involve the athletes unless necessary. He and another coach emphasized that while the athletic trainer is a part of the team they are more specifically a direct extension of the coaching staff. In their opinion, ATs were there not only to help keep the athletes healthy and but also be an educator and help the athletes understand what it takes to be healthy and stay healthy while competing at this level.

Mutual respect and trust between the coach and athletic trainer. As explained by one coach, "just having good trust...among two people and mutual respect for each person and what each person does," can be a very important element. One coach noted a

strong sense of trust in the relationship is imperative because they are the first line of defense when it comes to medical concerns. The same coach said he wants to be able to trust that the athletic trainer will take care of any medical issue at hand because he does not always have the resources or background to take care of these issues. According to another coach, the best relationships are ones where the athletic trainer trusts that the coach has the student athletes' best interests in mind. Where both parties understand that the coach and athletic trainer are "working together to try to get healthy players on the field and continue to keep them healthy and then when they get injured we want to get them out there back playing as fast as possible".

Importance of communication. The coaches emphasized the importance of the ability and desire to "communicate effectively" as well as having "tremendous lines of communication." Communication was emphasized more than once by all the coaches interviewed, as being one of the most important aspects of the relationship. One coach explained something they changed this year in order to improve those lines of communication. She said that, this year, "having someone [an athletic trainer] around at practice has actually been very useful for us this year [and] allows the communication to be that much better." This communication is not only important between the athletic trainer and head coach but other staff members as well, for example, the assistant coaches, strength coaches, nutritionists, and administrators. Having the athletic trainer out at practice was noted as being an important factor for her in the development of a stronger professional relationship because the communication lines are more direct and open.

Passion for the job and success of the team. Lastly, an important quality is that both parties have a passion for the achievement and success of the team. One coach explained the importance of having "passion for the job" and that his best athletic trainers were the ones who showed that they truly loved and enjoyed what they were doing. He explained that it is also important that athletic trainers make sure "they understand the flow of the team and what the team needs for everybody to be successful." Another found that the best professional relationships are those where the athletic "trainer trusts that the coach has the student athletes' best interest [in mind]" and that everyone is working toward the common goal of the success of the team.

Desired personality traits of an athletic trainer. A common theme among the participants was the personality of the athletic trainer with whom they were working. Although this was not a prevalent aspect in previous research, the coaches' responses highlighted it as an important component when a close professional relationship is necessary for the team's success.

Personable and well respected. It is important for the athletic trainer to be personable and approachable, easy to work with, and friendly. For these coaches, it is important that their athletic trainer have a sense of confidence, as this instills confidence in how the coaches and athletes feel toward them. These coaches also expressed that it is equally important to find a balance between confidence and professional arrogance. It was critical to one coach that the athletic trainers have "a good relationship" with the athletes. He explained that it is important for them to be personable and "friendly," but most important, the best athletic trainers find a balance between developing a personable

relationship as well as one where the athletes respect them professionally. He stressed the importance of an athletic trainer having the ability to be tough on them when necessary; for example, if an athlete misses a scheduled rehabilitation appointment, there needs to be repercussions and the athletic trainer needs to make it clear that the behavior is unacceptable. The athletic trainer who respects the athletes and is well respected in return, will have athletes that tell them what they need to know and want to communicate with them regarding injuries and problematic issues. An athletic trainer with these personality traits is easy to work with professionally and improves the chances of success working within the unit of the team.

Qualities of the athletic trainer as a professional. The volume of experiences and amount of knowledge and education were among the most important professional qualities of athletic trainers according to coaches.

Strong knowledge base but not egotistical. Two coaches expressed the importance of athletic trainers "knowing their stuff," "understanding the body," and being "well educated." One of the more desired qualities mentioned by most of the coaches interviewed is when the athletic trainer is not closed-minded about their responsibilities and approach to treatment or rehab plans. One coach explained a time when he tried to present an idea about a rehabilitation program and the athletic trainer responded defensively saying, "No. I know what I am doing, this is what we are going to do." He expressed that coaches have had a lot of experience with injuries and while their ideas "may not be conventional," they may "help with the healing process" and do not deserve to be shut down in such a defensive way. In one coach's opinion, if the athletic

trainer is stubborn and unwilling to listen to suggestions then "usually the athletes suffer longer and don't get the treatments they need." These coaches understand a good athletic trainer to be one where they have an "open mind" and are willing to hear any "suggestions if it makes the program better."

Being flexible and accessible to the athletes. Flexibility of time and being accessible was a common theme identified among coaches. One coach mentioned that "athletic trainers should understand they are in the service position, so they need to be available," while another mentioned that "the better [athletic] trainers are the ones that [understand that] their time is around the players time, not their time." Multiple coaches made it clear that an athletic trainer's willingness to do whatever is necessary at any time is critical especially during the season. For example, showing up early to see athletes when necessary, staying late for treatments after practices and games as well as being available around workout times. If the athletes have classes, it is important that they continue to receive treatment around their schedule. The athletic trainer needs to adapt to the schedule and needs of his or her athletes.

A strong work ethic. Along those same lines, various coaches explained that their most successful athletic trainers go "above and beyond what the school asks them do to" in terms of work and intellectually. Regarding athletic trainers' intellect, some coaches expressed pleasure in knowing their athletic trainer does additional research on the side to ensure they are using the best and more current techniques and providing the best care possible by continuing to strive for continued learning. A strong work ethic is a critical quality in the eyes of coaches. One coach explained that he looks for an athletic trainer

who has good "work habits…showing up early, being there late." In doing this, the athletic trainer acts as an extension of the coaching staff. One coach explained that one athletic trainer that was specifically successful with his team worked with the coaches in creating a pre-practice injury prevention program for the athletes. The athletic trainer also expressed interest in traveling with the team in order to be of assistance on the road, when historically the athletic trainer usually does not travel with this team. The extra effort and continued support is a desirable trait according to some coaches.

Provides a support system and educates the athletes. A team's athletic trainer is someone who helps "educate the athletes" and acts as a "part of the team" and "not just a stand alone trainer." One coach mentioned the importance of staying in tune with the athletes' mental and physical health. She explained that the athletic trainer "should take the extra second to check in on the psychological well-bing of an athlete." Another coach agreed, saying that, "it falls on the athletic trainer largely to be the point people for the athletes for that kind of stuff [mental health issues]." It is important for athletic trainers to understand the psychological stress that may encompass a student athlete especially at the Division I collegiate level.

Causes of conflict among coaches and athletic trainers. Even with the healthiest professional relationship there will be conflict, a fact upon which all the participants agreed. The coaches expressed common conflicts between the coaching staff and athletic trainers.

An inexperienced athletic trainer. Having an inexperienced athletic trainer was one source of conflict within the relationship for some coaches. They had a difficult time

"getting a young athletic trainer to understand" what they see as a coach because the athletic trainer didn't have "quite the number [of years] of experience." This coach explained more specifically that the conflict comes from a disagreement about the severity of an injury and whether it is one where the athletic trainer believes that the athlete cannot compete and the coach thinks they can push through and stick with it. He said that his most impactful source of conflict is trying to help a young athletic trainer see situations from the point of view of a coach.

An egotistical athletic trainer. Another source of conflict according to coaches was the ego of their athletic trainers. One coach explained that some athletic trainers feel like they "wanted to call their own shots a little more" with the rules and get "very defensive" when coaches approach them and want to make suggestions. One coach explained that as a team's athletic trainer, "you've got to follow the coach's guidance…the athletic trainer puts their rules ahead of what we do…" and this is what creates conflict. The "loyalty and backing of the coaching staff" is seen as critical to a few of these coaches as it is their responsibility to lead the team. When an athletic trainer undermines the coach by putting their rules ahead of the coaches', it is difficult to have a cohesive relationship that positively influences the team.

Misdiagnosed injuries and long recoveries. Finally, the most commonly mentioned source of conflict among participants was injuries going misdiagnosed or taking too long to recover. One coach mentioned that he felt like "some things are frustrating and could get done a little quicker." Another explained that "part of the biggest issue [is] why was this kid misdiagnosed…if you have an injury [and] treatment

for two days doesn't get better, then the definition of the injury might not be right because otherwise the treatment would have helped." In addition, two coaches expressed interest in their athletes seeing the doctor more quickly and on a regular basis when there is a pressing issue or injury that is not improving. These coaches were emphasizing an expedited process when it comes to athletes being properly evaluated and treated as to minimize the time away from sport participation.

Chapter 5 Discussion

The goal of this study was to examine the experiences of coaches with athletic trainers as well as knowledge of coaches about the roles and responsibilities of ATs at the NCAA Division I level. It was intended to highlight the potential need for coaches to be better educated about the profession of athletic training to ensure that the coach-athletic trainer relationship is functioning at its highest potential. These results provide insight on the knowledge of coaches in this particular sample size and cannot necessarily be generalized over the entire community of athletic trainers working in athletics at Division I institutions. According to the survey responses, coaches provided evidence that they were well versed in the profession of athletic training and had strong knowledge regarding the roles and responsibilities of ATs, as designated under their profession's scope of practice. A large percentage (over 60%) of the coaches correctly identified the competencies under the scope of athletic training that exemplify the coaches' awareness of the roles and responsibilities of athletic trainers. This knowledge implies that there is a good mutual understanding about the profession of athletic training among these coaches. The domains of athletic training laid out by the NATA are the most accurate resource in defining athletic training as a profession and the majority of these coaches correctly identified the competencies under these domains (NATA, 2011b). Previous research on this topic uncovered a lack of knowledge regarding the roles and responsibilities of athletic trainers among those with whom they work. However, based on the results of this study, this was not the case among this group of participants.

The responses from the interviews provided athletic trainers and coaches with information about some of the best ways to promote a positive professional relationship. This is valuable information especially for an athletic trainer who is seeking clarity about what coaches are looking for in an athletic trainer. The information that the coaches provided in the interviews lays out exactly what *they* would want their athletic trainer to be like and the qualities they would look for. It is possible however, that other coaches may feel differently than those who participated in the interviews, thus, it is even more important for athletic trainer to communicate with their specific coach in order to find out exactly what his or her expectations are. In addition, these responses highlight the aspects of a relationship that these coaches appreciate the most. For example, showing mutual respect for one another, staying on the same page, passion for the job, and communication. These are components to keep in mind when fostering and maintaining a relationship with anyone on a sports medicine staff

Communication was expressed as a very important element in professional relationships by the interviewees. Communication is equally as important between the other members of the sports medicine staff as well. It is important that an athletic trainer emphasize communication as much as possible. Communication between the coach and athletic trainer leads to a clear understanding of what the coach is looking for and what is expected. If both the coach and the athletic trainer are clear as to the expectations of each other then the relationship is that much more likely to benefit the team in a positive way and promote the care of the athletes.

It is equally as important to develop positive professional relationships with the other members of the sports medicine team, i.e., team physicians, administrators, and athletes; this can be done by applying the knowledge gained from this study. If all members of a sports medicine team can apply this knowledge and achieve professional relationships where each member clearly understands the others' roles and responsibilities, the athletes will have the optimal opportunity to receive the best care possible.

Good communication leads to mutual understanding and therefore a healthy relationship (IHC, 2011). Knowing this, it is a positive sign that communication was deemed by all coaches who were interviewed as one of the most important aspects to a healthy professional relationship. In addition, seeing as 60% of the coaches reported that they communicate with their athletic trainer five or more times per week, these results reinforce the idea that the amount of communication between two professionals positively correlates to the level of understanding between them. This research provided insight in the specific area of Division I athletics and coaches, an area that had not yet been explored by researchers. It also highlighted the need for more research regarding the relationships between coaches and athletic trainers in all levels of athletics. Because these are two critical members of a sports medicine team, it is imperative that researchers look into ways to improve this relationship. The sample used in this study cannot be generalized among all athletic trainers as it only examines athletic trainers at Division I institutions in the Bay Area region of California (California Department of Social Services, 2002). There is an opportunity for more research regarding these same topics in

other parts of the United States. The results would highlight the similarities or differences among coaches around the country and their knowledge about the athletic training profession. It is possible that knowledge about the athletic training profession and relationships between coaches and athletic trainers are different in other areas of the United States. If this is the case, athletic trainers should be conscious about educating their coaches about the profession and becoming more aware of what coaches desire in an athletic trainer who works for their current team.

Most of the research regarding the professional relationships of athletic trainers investigated the opinions and views not of the athletic trainer but of the counterpart, for example, the coach, athlete, or orthopedic surgeon. There is a gap in the research where more exploration can be done on the opinions of athletic trainers, what they believe to be the critical components of a professional relationship, and how they communicate with other professionals. In dealing with the health of athletes, a positive professional relationship is of upmost importance as it helps ensure that all parties are continuously striving toward creating an environment where an athlete can achieve the safest return to play (Fu et al., 2007). The most important common theme among coaches and athletic trainers is that they are there to better the lives of the student-athletes, each party succeeds by creating an environment where the athlete can compete at the highest level while maintaining a safe and healthy life style.

References

Ambegaonkar, J., & Caswell, S. (2009). Dance program administrators' perceptions of athletic training services. *Athletic Therapy Today, 14*(3), 17-19.

Anderson, M. K., Hall, S.J., & Martin, M. (2004). *Foundations of athletic training: prevention, assessment, and management.* Philadelphia, Pennsylvania: Lippincott, Williams, & Wilkins.

Baumgartner, T. A., & Hensley, L. D. (2006). *Conducting and reading research in health and human performance* (4th edition). Boston, MA: McGraw-Hill.

Berg, B. L. (2004). A dramaturgical look at interviewing. In B. L. Berg, *Qualitative research methods for the social sciences* (pp. 75-122). Boston: Pearson Education.

Board of Certification, Inc. Continuing education. (2011). *Board of Certification, Inc*. Retrieved May 2, 2012, from http://www.bocatc.org/index.php?option=com_content&view=article&id=53&Itemid=56

Board of Certification, Inc. What is the BOC. (2012). *Board of Certification, Inc.* Retrieved August 13, 2013, from http://www.bocatc.org/about-us

Brooks, K. (2012). Collegiate athletic participation, physical limitations, and chronic disease risk. *Journal of Exercise Physiology Online, 15*(1), 15-25.

Creswell, J. (2007). Philosophical, paradigm, and interpretive frameworks. In J. C. Creswell, *Qualitative Inquiry & Research Design*, 2nd ed. (pp. 15-34). Thousand Oaks: Sage.

Denzin, N.K. & Lincoln, Y.S. (2003). Introduction: The discipline and practice of qualitative research. In Denzin, N.K. & Lincoln, Y.S. (Eds.), *The landscape of qualitative research: Theories and issues*, 2nd ed. (pp. 1-45). Thousand Oaks, CA: Sage.

Fu, F., Tjoumakaris, F., & Buoncristiani, A. (2007). Building a sports medicine team. *Clinics in Sports Medicine, 26*, 173-179.

Hayden, L. A., & Lynch, M. (2011). The role of ATs in helping coaches to facilitate return to play. *International Journal of Athletic Therapy & Training, 16*(1), 24-26.

Communication in healthcare. (July, 2011). *Institute for Healthcare Communication.* Retrieved November 8, 2012, from http://healthcarecomm.org/about-us/impact-of-communication-in-healthcare/

Marshall, C., & Rossman, G. B. (2006). Chapters 2 & 3 (Conceptual frameworks and research design). In C. Marshall & G. B. Rossman, *Designing qualitative research* (4th Ed.), (pp. 23-74). Thousand Oaks, CA: Sage.

Massachusetts General Hospital: Department of Orthopedics. (2013). *Anterior cruciate ligament injury*. Retrieved April 30, 2013, from

http://www.massgeneral.org/ortho/services/sports/rehab/Anterior%20Cruciate%20Ligament%20Reconstruction(ACLR)%20protocol.pdf

Mensch, J., Crews, C., & Mitchell, M. (2005). Competing perspectives during organizational socialization on the role of certified athletic trainers in high school settings. *Journal of Athletic Training, 40*(4), 333-340.

NATA Study Guide Reflects 6th Role Delineation Study. (2011). *International Journal of Athletic Therapy & Training,* 16(2), 45-46.

National Athletic Trainers' Association. Athletic training. (2012). *National Athletic Trainers' Association*. Retrieved April 30, 2012, from http://www.nata.org/athletic-training

National Athletic Trainers' Association. Athletic training education overview. (January, 2009). *National Athletic Trainers' Association.* Retrieved April 30, 2012, from http://www.nata.org/sites/default/files/education-overview.pdf

National Athletic Trainers' Association. Athletic training services: An overview of skills and services performed by certified athletic trainers. (January, 2010). *National Athletic Trainers' Association.* Retrieved April 30, 2012, from http://www.nata.org/sites/default/files/GuideToAthleticTrainingServices.pdf

National Athletic Trainers' Association. NATA history. (2013). *National Athletic Trainers' Association.* Retrieved August 13, 2013, from http://www.nata.org/nata-history

National Athletic Trainers' Association. Profile of athletic trainers. (2011). *National Athletic Trainers' Association*. Retrieved April 30, 2012, from http://www.nata.org/sites/default/files/AT_Facts_revSept2011.pdf

National Collegiate Athletics Association. Division I: About Division I. (May, 2013). *National Collegiate Athletics Association.* Retrieved August 13, 2013, from http://www.ncaa.org/wps/wcm/connect/public/ncaa/divisioni/about+division+i

Raab, S., Wolfe, B. D., Gould, T. E., & Piland, S. G. (2011). Characterizations of a quality certified athletic trainer. *Journal of Athletic Training, 46*(6), 672-679.

Ray, R. R. (1987). A survey of Michigan school superintendents' knowledge of and attitudes towards athletic injuries, athletic trainers, and legal liability. *Athletic Training, 22*(4), 311-315.

Smith, B. & Sparkes, A. (2005). *Men, sport, spinal cord injury, and narratives of hope. Social Science & Medicine*, 61, 1095-1105.

Spangler, K., Blankenship, B., Leverenz, L., & Templin, T. (2008). Athletic trainer and athlete perceptions of effective communication. *Indiana AHPERD Journal, 37*(2), 23-26.

Starkey, C. (2004). Free communications, oral presentations: perceptions of ATCs in the workforce. Journal of Athletic Training, 39S-21-S-22.

Storch, S. M., Stevens, S. W., & Allen, A. M. (2007). Orthopedic surgeons' perceptions of athletic trainers as physician extenders. *Athletic Therapy Today, 12*(3), 29-31.

Tallia, A.F., Lanham, H.J., McDaniel, R.R., Crabtree, B.F. (2006). Seven characteristics of successful work relationships. *Family Practice Management, 13*(1), 47-50.

Taylor, S. J., & Bogdan, R. (1998). *Introduction to qualitative research methods* (3rd ed.). New York: John Wiley.

Unruh, S. (1998). Perceptions of athletic training services by collegiate student-athletes: a measurement of athlete satisfaction. *Journal of Athletic Training, 33*(4), 347-350.

Winterstein, A. P. (2010). The athletic trainer-physician relationship. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician, 2*(4), 155-159.

Appendix A

Recruitment E-mail to Coaches

Dear Coaches,

My name is Laura Alexander and I am a master's student in the Kinesiology department at San José State University. I am currently conducting research for my thesis, which is an investigation of head coaches' experiences with athletic trainers in Division I collegiate athletics. The primary goal of this study is to develop a clear understanding of coaches' knowledge about athletic trainers' roles and responsibilities specifically in Division I athletics.

I am writing to ask for your assistance with this research, by participating in a brief 7-10 minute survey. The initial part of the study consists of an online survey that includes a few demographic questions followed by a series of questions on your experiences with athletic trainers and general questions about the profession of athletic training.

Below is a link to the brief 10-minute survey.

Follow this link to the Survey: ${l://SurveyLink?d=Take the Survey}

Human Subjects approval from the University's Institutional Review Board (IRB) has already been approved for this study. An important part of the approval process is to ensure the protection and anonymity of all participants. No real names will be used in this study, and all names of participants and their universities will be changed in order to maintain confidentiality for you and your university. No information will be used or published that could lead back to you, your team, or your university in any way. Below is a link to the formal recruitment letter for your reference.
SJSURecruitmentLetter

I am passionate and excited about this research and hope you can assist by taking the survey. Your responses are important and will make a valuable contribution to the study.

Thank you for your time,

Laura

Laura Alexander, ATC
Graduate Assistant Athletic Trainer
San José State University Athletics

Appendix B

Survey: Coaches' Knowledge of Athletic Trainers in a Division I Setting

Demographic questions

1. Gender
   a. Male
   b. Female

2. What is your age?
   a. 0-20 years old
   b. 21-40 years old
   c. 41-60 years old
   d. 61-80 years old
   e. Over 80 years old

3. Did you participate in collegiate athletics?
   a. Yes
   b. No

4. How long have you been coaching?
   a. 0-2 years
   b. 3-5 years
   c. 6-8 years
   d. 8-10 years
   e. Over 10 years

5. How long have you been coaching at the Division I level?
   a. 0-2 years
   b. 3-5 years
   c. 6-8 years
   d. 8-10 years
   e. Over 10 years

6. As a coach, have you had experience working with an athletic trainer?
   a. Yes
   b. No

7. Do you currently have an athletic trainer working with the team you are coaching?
   a. Yes
   b. No

8. If yes, how many times a week do you interact on a professional level with your team's athletic trainer?
    a. I do not have an athletic trainer working with my team
    b. 0 times
    c. 1-2 times
    d. 3-4 times
    e. 5-6 times
    f. 7 or more times

Please answer to the best of your ability

9. What does "ATC" stand for?
    a. clinical athletic trainer
    b. certified athletic trainer
    c. conditional athletic trainer
    d. athletic training clinician

10. What is the minimum degree an athletic trainer is required to complete before becoming an athletic trainer?
    a. No college degree required
    b. Associates degree
    c. Masters degree
    d. Bachelors degree
    e. Doctoral degree

11. What are the clinical experience requirements for an undergraduate student in an athletic training education program?
    a. Athletic training students must only observe athletic trainers to see what athletic trainers' daily duties are.
    b. Athletic training students are NOT allowed to treat or work with athletes in any setting during their undergraduate education because they are not certified
    c. Athletic training students are required to complete and show evidence of hours of clinical experience in various settings of athletics as a part of their undergraduate education
    d. Athletic training students have the option to participate in additional hours of experience or not participate

12. What is the certification process for athletic trainers?
    a. There is no certification process for athletic trainers
    b. ATs are automatically certified upon graduation
    c. ATs are required to achieve a Master's degree or higher before becoming certified

d. ATs are required to complete and pass a national board exam before becoming certified

For questions 13-17, please select all that apply

Certified Athletic Trainers are competent in 5 domains of athletic training; please check all competences that athletic trainers can perform under each domain.

13. Injury/illness prevention and wellness protection:

- ❑ recognizing appropriate and inappropriate fitting athletic equipment (i.e. helmets, shoulder pads etc.)
- ❑ educate patients on supplements/vitamins
- ❑ maintenance of the area of play (i.e. field, court, etc.)
- ❑ monitor environmental conditions (i.e. weather, field inspection) and ensuring group safety based on those conditions
- ❑ maintain or improve physical condition for an athlete to minimize risk of injury
- ❑ sending equipment to the appropriate certification agencies to ensure safety

14. Clinical evaluation and diagnosis:

- ❑ assessing current injuries by obtaining a patients thorough history of injury
- ❑ using observational and palpating techniques to determine the type and extent of an injury
- ❑ performing diagnostic imaging tests
- ❑ the use of special tests to evaluate and formulate clinical diagnoses of musculoskeletal conditions (i.e. muscle strains, joint sprains)
- ❑ the use of special tests to evaluate and formulate clinical diagnoses of neurological impairments and/or conditions (i.e. concussions, nerve injuries)
- ❑ interpreting signs, symptoms, and predisposing factors of injuries, illnesses, and health related
- ❑ providing prescriptions for diagnostic imaging (MRI, X-Ray, CT scan, EKG, etc.)

15. Emergency and immediate care

- ❑ assist in emergency surgery
- ❑ coordinate and apply immediate and emergency care of individuals
- ❑ perform Cardiopulmonary Resuscitation (CPR) and use an Automated External Defibrillator (AED)
- ❑ application of intravenous infusion i.e. an IV, medications etc.)
- ❑ providing care while in route to a medical facility

- ❑ prevent exacerbation of life-threatening and non-life-threatening conditions to reduce risk factors for morbidity and mortality
- ❑ determine and implement appropriate referral strategies to specialists
- ❑ drawing blood from a patient in an emergent situation
- ❑ providing airway intubation when a patient is not breathing

16. Treatment and rehabilitation

- ❑ application of braces and other assistive devices injury protection and function
- ❑ prescription of orthotics and other protective equipment
- ❑ determining the need for surgical intervention of an injury
- ❑ administration of therapeutic exercise using appropriate techniques to aid recovery and function
- ❑ prescription of medications such as albuterol inhalers and painkillers
- ❑ use of manual therapy as treatment to assist recovery and return to function
- ❑ use of electric stimulation and other electronic modalities as treatment to assist recovery and return to function
- ❑ aspirating/removing fluid from wounds
- ❑ use of ultrasonographic therapy as treatment to assist recovery and return to function
- ❑ assessment of injury status to assist in determining time of return to play
- ❑ provide referral to specialists when athletes are in need of additional injury specific
- ❑ dispensing of over the counter medications such as ibuprofen and acetaminophen
- ❑ administering medication via injection

17. Organization, professional health and well-being

- ❑ organize medical coverage and staffing for athletic events
- ❑ properly maintain/store records and medical documentation
- ❑ assisting in the formulation of a budget and allocating provided funds properly
- ❑ development of a referral process to address unhealthy lifestyle behavior
- ❑ billing insurance for services provided in the clinic

Short Answer

18. Please briefly describe any positive experiences you have had with a certified athletic trainer.

19. Please briefly describe any negative experiences you have had with a certified athletic trainer.
20. Would you be willing to participate in a brief follow-up phone interview?

1. Yes
2. No

If yes, please fill in the blank with the email address to best contact you by:

_____

Appendix C

Semi-Structured Interview Guide

1. Please describe in more detail the positive experience you had with the athletic trainer that was mentioned in the open-ended question of the survey.

2. How did the athlete(s) impact the situation for the better or worse?

3. Did other administrators become involved in order to mediate?

4. If this was a negative experience, were there consequences for either you or the coach as a result of this predicament?

5. What qualities did the athletic trainer have that made him or her successful?

6. What aspects of the professional relationship you had with the athletic trainer contributed to the positive experience with him or her?

7. Please describe in more detail the negative experience you had with the athletic trainer that was mentioned in the open-ended question of the survey.

8. What events led to the culmination of this negative experience with him or her?

9. What qualities did this athletic trainer have that you felt were detrimental to a positive professional relationship?

10. Looking back on the negative experience with the athletic trainer, is there anything you would do differently that may have changed the outcome?

11. Was the situation able to be resolved? If so, how was it resolved?

12. Was the relationship between yourself and the athletic trainer able to be salvaged?

13. Having had this experience, what qualities do you look for in an athletic trainer in order to have the best possible professional relationship?

14. What qualities do you think a coach should have in order to promote the healthiest professional relationship?

15. What do you think are the most important aspects of a professional relationship?

Appendix D

Tables

Table 1

Question 8 How Many Times Per Week Do You Interact with Your Teams' Athletic Trainer?

#	Answer	Response	%
1	I do not have an athletic trainer working with my team	0	0%
2	0 times	0	0%
3	1-2 times	7	23%
4	3-4 times	6	19%
5	5-6 times	11	35%
6	7 or more times	7	23%

Table 2

Question 10 What is the minimum degree an athletic trainer is required to complete before becoming an athletic trainer?

#	Answer	Response	%
1	No college degree is required	1	3%
2	Associate's degree	0	0%
3	Bachelor's degree	16	52%
4	Master's degree	14	45%
5	Doctoral degree	0	0%

Table 3

Question 11 What are the clinical experience requirements for an undergraduate student in an athletic training education program?

#	Answer	Response	%
1	Athletic training students must only observe certified athletic trainers to see what their daily duties are.	1	3%
2	Athletic training students are NOT allowed to treat or work with athletes in any setting during their undergraduate education because they are not certified.	1	3%
3	Athletic training students are required to complete and show evidence of hours of clinical experience in various settings of athletics.	29	94 %
4	Clinical experience hours are optional for athletic training students.	0	0%

Table 4

Question 12 What is the Certification Process for Athletic Trainers?

#	Answer	Response	%
1	There is no certification process for athletic trainers.	0	0%
2	Athletic trainers are automatically certified upon graduation from their undergraduate athletic training education program.	2	7%
3	Athletic trainers are required to earn a Master's degree or higher before becoming certified.	8	27%
4	Athletic trainers are required to complete and pass a national board exam before becoming certified.	20	67%

Table 5

Question 13 Domain I: Injury/illness Prevention and Wellness Protection

#	Answer	Response	%
1	recognizing appropriate and inappropriate fitting athletic equipment (i.e., helmets, shoulder pads)	23	77%
2	educating patients on supplements/vitamins	24	80%
3	maintaining of the area of play (i.e., field, court)	8	27%
4	monitoring environmental conditions (i.e., weather, field inspection) and ensuring group safety based on those conditions	20	67%
5	maintaining or improving the physical condition of an athlete to minimize risk of injury	28	93%
6	sending equipment to the appropriate certification agencies to ensure safety	13	43%

Table 6

Question 14 Domain II: Clinical Evaluation and Diagnosis

#	Answer	Response	%
1	assessing current injuries by obtaining a patients thorough history	28	97%
2	using observational and palpating techniques to determine the type and extent of an injury	26	90%
3	performing diagnostic imaging tests	3	10%
4	using special tests to evaluate and formulate clinical diagnoses of musculoskeletal conditions (i.e., muscle strains, joint sprains)	25	86%
5	using special tests to evaluate and formulate clinical diagnoses of neurological impairments and/or conditions (i.e., concussions, nerve injuries)	24	83%
6	interpreting signs, symptoms, and predisposing factors of injuries, illnesses, and health related conditions	27	93%
7	providing prescriptions for diagnostic imaging (MRI, X-Ray, CT scan, EKG, etc.)	8	28%

Table 7

Question 15 Domain III: Emergency and Immediate Care

#	Answer	Response	%
1	assisting in emergency surgery	1	3%
2	coordinating and applying immediate and emergency care of individuals	27	93%
3	performing Cardiopulmonary Resuscitation (CPR) and use an Automated External Defibrillator (AED)	27	93%
4	providing intravenous infusion (i.e., an IV, medications)	0	0%
5	providing care while in route to a medical facility	15	52%
6	preventing the exacerbation of life-threatening and non-life-threatening conditions to reduce risk factors for morbidity and mortality	19	66%
7	determining and implementing appropriate referral strategies to specialists	23	79%
8	drawing blood from a patient in an emergency situation	1	3%
9	providing airway intubation when a patient is not breathing	8	28%

Table 8

Question 16 Domain IV: Treatment and Rehabilitation

#	Answer	Response	%
1	application of braces and other assistive devices for injury protection and musculoskeletal function	24	83%
2	prescribing orthotics and other protective equipment	8	28%
3	determining the need for surgical intervention of an injury	3	10%
4	creating and administering rehabilitation programs using appropriate techniques to aid recovery and function	26	90%
5	prescribing medications such as albuterol inhalers and painkillers	0	0%
6	using manual therapy, such as massage or trigger point therapy, as treatment to assist recovery and return to function	27	93%
7	using electric stimulation and other electronic modalities as treatment to assist recovery and return to function	27	93%
8	aspirating/removing fluid from wounds	11	38%
9	using ultrasonographic therapy as treatment to assist recovery and return to function	19	66%
10	assessing injury status to assist in determining time of return to play	25	86%
11	referring athletes to specialists when injuries are beyond the general scope of an athletic trainer	27	93%
12	dispensing over the counter medications such as ibuprofen and acetaminophen	14	48%
13	administering medication via injection	0	0%

Table 9

Question 17 Domain V: Organization, Professional Health and Well-Being

#	Answer	Response	%
1	organizing medical coverage and staffing for athletic events	28	97%
2	properly maintaining/storing records and medical documentation	27	93%
3	assisting in the formulation of a budget and allocating provided funds properly	21	72%
4	developing a referral process to address unhealthy lifestyle behaviors	26	90%
5	billing insurance for services provided in the athletic training room/clinic	18	62%

Appendix E

Institutional Review Board Approval Letter

SAN JOSÉ STATE
UNIVERSITY

Division of Academic Affairs
Associate Vice President
Graduate Studies & Research
www.sjsu.edu/gradstudies

One Washington Square
San José, California 95192-0025
Voice: 408-924-2427
Fax: 408-924-2612

www.sjsu.edu

To: Laura Alexander

From: Pamela Stacks, Ph.D.
Associate Vice President
Graduate Studies and Research

Pamela C Stacks

Date: January 31, 2013

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"Coaches' Experience and Knowledge of Athletic Trainers in a Division I Setting"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the confidentiality of the subjects' identity when they participate in your research project, and with regard to all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Pamela Stacks, Ph.D. immediately. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information. This approval for the human subject's portion of your project is in effect for one year, and data collection beyond January 31, 2014 requires an extension request.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2427.

Protocol # S1302015

cc. Jessica Chin 0054