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Descriptive Study of the State of Post-Professional Athletic Training Education Points of Distinctiveness, Specialty Certifications, and Competencies

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DESCRIPTIVE STUDY OF THE STATE OF POST-PROFESSIONAL ATHLETIC TRAINING EDUCATION: POINTS OF DISTINCTIVENESS, SPECIALTY CERTIFICATIONS, AND COMPETENCIES

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ABSTRACT

DESCRIPTIVE STUDY OF THE STATE OF POST-PROFESSIONAL ATHLETIC TRAINING EDUCATION: POINTS OF DISTINCTIVENESS, SPECIALTY CERTIFICATIONS, AND COMPETENCIES

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Context: As post-professional athletic training education programs (PPATEPs) continues to advance, it is crucial that it be studied and evaluated, however current research is limited. **Objective:** To obtain descriptive information about PPATEPs. **Design:** Online Survey Instrument **Participants:** Of the 267 graduates in population, 106 participants submitted the completed survey (39.70% response rate). **Main Outcome Measure(s):** Data collection occurs over a four-week period during the fall of 2010. The survey instrument was created with Inquisite 9.5 Corporate Survey Builder (Catapult System Corporation, Austin, Texas). Participants answer questions about the program's points of distinctiveness (PODs), specialty certifications, and the new competencies in PPATEPs. **Results:** Graduates very satisfied (4.36±0.62) with the ability of the program to advance their knowledge and skill in the areas of the PODs. Graduates reported that the program's POD were emphasized strongly across all four mechanism of emphasis (faculty expertise = 70.99%, research emphasis 52.76%, academic courses 50.28%, and clinical experience 45.86%). Graduates also reported that the PODs are related to the new competencies being implemented into graduate education (patient-centered care 255/362, interdisciplinary collaboration 252/362, evidence-based practice 292/362, quality improvement 263/362, healthcare informatics 227/362). The PODs were likely (3.16±0.85) to developed in a specialty certification (SC).Graduates reported that the

program's POD were influential (3.56±1.42) on their decision to apply to the program and influential (3.28±0. 97) on which jobs they applied to. **Conclusion:** While there were many components studied, each component was related to the POD. We have concluded that graduates are satisfied with the advancement of knowledge and skill they attained while at their PPATEP and that these PODs are emphasized strongly across the four mechanisms of emphasis. The graduates also felt that the program's PODs were likely to develop into SC and that the new competencies for PPATEP are related to the program's PODs. Graduates also felt that the program's PODs were influential when applying to the program as well as applying to jobs after graduation. **Key Words:** post-professional athletic training education, points of distinctiveness, specialty certifications, competencies

This thesis is dedicated to my mentors Heidi Matthews and Kendall Selsky. Thank you for believing in me from the beginning of my journey in becoming an athletic trainer. I hope one day to be as great of an athletic trainer and educator as the both of you.

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CHAPTER I

INTRODUCTION

The development of athletic training as a profession is linked to the evolution of athletic training education (Delforge & Behnke, 1999). The National Athletic Trainer's Association (NATA) was founded in 1950 with the purpose to strengthen the profession of athletic training by exchanging thoughts, ideas, and knowledge between professionals (O'Shea, 1980). This purpose was further strengthened with the recognition of the first undergraduate athletic training education program (ATEP) by the NATA in 1969. Not long after, in 1972, the NATA approved the first graduate-level athletic training education programs, which are now known as post-professional athletic training education programs (Delforge & Behnke, 1999).

Post-professional athletic training education programs (PPATEP) are focused in specific areas of interests, or points of distinctiveness, for the development of skills for the profession of athletic training. In athletic training, the PPATEP's curricular content and clinical experience should be more advanced when comparing it to professional programs (Wilkerson, Colston, & Bogdanowicz, 2006). The education experience is designed to enhance the student's existing knowledge and also improve the student's ability to function in a clinical, teaching, administrative, and/or research setting (NATA, 2002). The mission of PPATEPs is "to expand the depth and breadth of the applied, experiential, and propositional knowledge and skills of entry level certified athletic trainers, expand the athletic training body of knowledge, and to disseminate new knowledge in the discipline" (NATA, 2002). One of the major differences between the professional and post-professional athletic training education programs is the

participation of post-professional athletic training students in research experiences and clinical experiences for practicing clinical skills (Wilkerson, et al., 2006). PPATEPs are designed to enhance the student's ability to function in teaching settings, clinical settings, administrative roles, and research environments (NATA, 2002).

In 1997, the Graduate Education Committee, which was part of the NATA Education Council, was given the task to evaluate and revise the graduate program standards and guidelines and developed the *Standards and Guidelines for the NATA Accredited Post-Professional Athletic Training Education Programs*. The *Standards and Guidelines* document was formulated for universities and colleges that are developing or maintaining NATA accreditation for their post-professional athletic training education programs. The *Standards and Guidelines* were also developed to encourage thought and empower post-professional program directors and institutions to develop programs specifically around their strengths and points of distinctiveness (NATA, 2002). An emphasis throughout the *Standards and Guidelines* is the establishment of the program's points of distinctiveness (NATA, 2002).

Points of distinctiveness are specific areas of interest established by each PPATEP. The purposes of the points of distinctiveness are to guide the focus of the program, including the didactic, clinical, and research components. Since there are no specific course requirements, the curriculum should be centered on the program's points of distinctiveness. These points of distinctiveness should also relate to the philosophy of the institution as well as the faculty, academic courses, clinical experience, teaching, administrative, and/or research components (NATA, 2002).

While no other health care professions have points of distinctiveness in post-professional education, some health care professions, like nursing and physical therapy, have specialty certifications incorporated into clinical practice (ABNS, 2009, APTA, 2009a). If incorporated into athletic training, specialty certifications (SC) within athletic training could be an advanced clinical practice credential that demonstrates the attainment of knowledge and skills that will enhance the quality of patient care, optimize clinical outcomes, and improve patients' health-related quality of life, in specialized areas of athletic training practice (Sauers, 2007).According to Wartew (2003), specialty certification enhances the professional's development and expertise, which should always be an ongoing goal of a health care professional. It allows the clinician to have an advanced clinical practice credential that can enhance patient care and patient outcomes (Sauers, 2007).

The Post-Professional Education Council (PPEC) has developed competencies for PPATEPs, which have been approved by the NATA, and they will be incorporated into the next edition of the *Standards and Guidelines*. According to Verma, Paterson, and Medves (2006), competencies are used to define discipline and specialty standards and expectations and to align practitioners, learners, teachers, and patients with evidence-based standards of health care and performance. These six competencies that will be implemented in PPATEPs are: patient-centered care, interdisciplinary collaboration, evidence-based practice, quality improvement, use of healthcare informatics, and professionalism (Sauers, 2007). The competencies are based off of the Institute of Medicine five core competencies for graduate education in health care professions (IOM, 2003).

As post-professional athletic training education continues to advance, it is crucial that post-professional athletic training education programs be studied and evaluated, however existing information is limited. Henry, Van Lunen, Udermann, and Onate (Henry, Lunen, Udermann, & Onate, 2009) focused on curricular satisfaction levels of graduates from PPATEPs and found that graduates were generally satisfied with the program's curriculum and proposed further research into satisfaction levels specific to the program's varying points of distinctiveness. This is the only study to date of post-professional athletic training education programs that assess the graduate's perceptions of the program. It is important to assess and understand what current students graduates think about their programs. This study specifically assesses whether the graduates of PPATEPs have an advanced level of knowledge and understanding in the areas specific to the program's points of distinctiveness as well as if the graduates feel that the program's points of distinctiveness can become specialty certifications and incorporate the new competencies.

Statement of Problem

The purpose of this study was to assess 2009-2010 NATA accredited post-professional athletic training education program graduates' level of satisfaction in the program's ability to advance and develop the graduate's knowledge and skill in the area of the specific points of distinctiveness. A secondary purpose was to assess the graduate's confidence level in identifying the program's points of distinctiveness. We also examined whether graduates felt the program's points of distinctiveness could become a specialty certification, if they felt that the program's points of distinctiveness encompass any of the

new post-professional competencies, and if the program's points of distinctiveness had any influence on their decision to apply to the program and positions after graduation.

Research Hypotheses

1. Graduates from PPATEPs will be satisfied in their advancement of knowledge and skill in the areas of the program's points of distinctiveness.
2. Graduates from PPATEPs will be influenced by the program's points of distinctiveness when applying for jobs/positions.
3. Graduates from PPATEPs will be confident in identifying the program's points of distinctiveness.
4. Graduates from PPATEPs will be influenced by the program's points of distinctiveness when applying to the program.
5. Graduates from PPATEPs will report the program's points of distinctiveness were emphasized equally through the four mechanisms (faculty expertise, academic courses, research emphasis, and clinical experience).
6. Graduates will report the PPATEP's points of distinctiveness are related to the six new competencies (patient-centered care, interdisciplinary collaboration, evidence-based practice, quality improvement, use of healthcare informatics, and professionalism).

Operational Definitions

Academic Courses- Courses included within the post-professional program that were derived to support the chosen points of distinctiveness of the program.

Clinical Experience- the clinical experience encompasses interaction with patients and providing patient care.

Competencies – Competencies within Post-Professional programming that were adopted from the IOM. The six competencies are: 1) patient-centered care, 2) interdisciplinary collaboration, 3) evidence-based practice, 4) quality improvement, 5) use of healthcare informatics, and 6) professionalism (NATA, 2010).

Commission on Accreditation of Athletic Training Education – The *Commission on Accreditation of Athletic Training Education* (CAATE) is the agency that accredits entry level (professional) athletic training education programs (www.caate.net).

Confidence- The feeling of being certain and having self-assurance in one's Knowledge related to the question/statement being asked of the participants.

Faculty Expertise- Expertise within areas of athletic training that faculty have that may contribute to the formulation of points of distinctiveness for the post-professional program.

Influence- The ability of the post-professional athletic training education program and components of the program to have an effect on the students and graduates, both professionally and personally.

National Athletic Trainers' Association – The *National Athletic Trainers' Association* (NATA) was formed in 1950 with the mission to enhance the profession of athletic training. The NATA has a mission to enhance the quality of health care for athletes as well as those who partake in physical activity, and continues to advance the profession of athletic training through both education and research in the areas of prevention, evaluation, management and rehabilitation of injuries. (www.nata.org)

NATA- Accredited Post-Professional Athletic Training Education Program - a program that is accredited by the National Athletic Trainers' Association with a goal to

expand the skills and knowledge of the students beyond what is required of entry level athletic training education. Students in these programs are Board of Certification (BOC) certified or eligible to take the exam. As of 2011, there are fifteen post-professional athletic training education programs (*Standards and Guidelines for the Post-Certification Graduate Athletic Training Education Program*, 2002).

Points of Distinctiveness - Interest areas of the program that guide and focus the program to educate the students in the specific areas set out by the programs. The curriculum of the program is driven by the points of distinctiveness. These points of distinctiveness should relate to those of the college/university and faculty (*Standards and Guidelines for the Post-Certification Graduate Athletic Training Education Program*, 2002).

Post-Professional Education Council (PPEC) - The Post-Professional Education Council is comprised of members involved in post-professional education or advanced clinical settings. It oversees and develops NATA accredited PPATE, residency programs, and athletic training specialty board certification. The Post-Professional Education Council develops standards for PPATEPs in conjunction with the Post-Professional Education Review Committee. It is the appeal board for programs who dispute any decisions from the Post-Professional Education Review Committee (NATA, 2011a).

Post-Professional Education Review Committee (PPERC) - The Post-Professional Education Review Committee (PPERC) is comprised of members with areas of expertise in post-professional education. This committee reviews the PPATEP and works with the Post-Professional Education Council on post-professional education

issues. The PPERC implements the accreditation standards and makes accreditation recommendations to the Board of Directors (NATA, 2011b).

Research Emphasis- The area of research that the post-professional program is known for and has decided to support. The areas are often defined by the interests of the faculty and the availability of resources to the institution.

Satisfied- The fulfillment of the student's expectations of the post-professional athletic training education program.

Specialty Certification –A specialty certification (SC) is an advanced clinical practice credential that demonstrates the attainment of knowledge and skills that will enhance the quality of patient care, optimize clinical outcomes, and improve patients' health-related quality of life, in specialized areas of athletic training practice. The SC allows the professional to broaden their base of knowledge in a specific area (Sauers, 2007).

Assumptions

1. The survey has acceptable content validity and will be an accurate indicator of satisfaction levels among the participants.
2. All participants completing the survey understand the questions of the survey.
3. All participants answer survey questions honestly.
4. All participants follow the directions of the survey.
5. All participants of the survey are graduates of NATA accredited post-professional graduate athletic training education programs.

6. The NATA Accredited Post-Professional Athletic Training Education Programs will have the established points of distinctiveness that match with the demographic graduation year of the students.

Limitations

1. Each question of the survey was specific to the program's points of distinctiveness; however the wording of each question was the same.
2. The overall experience that the participant had with their post-professional athletic training education program, including their curricular, research, and clinical experience for each graduate is unique.
3. There may have been change in points of distinctiveness of the program while the participant attended the program.
4. The participants may not fully understand how to answer a question, due to wording or content.
5. The setting and environment in which the participant completes the survey in can affect the way a participant answers questions.
6. The lack of ability to obtain accurate e-mail addresses of the graduates of the NATA-Accredited Post-Professional Programs from 2009-2010 through the NATA Membership Directory and online search.
7. Each institution was not represented proportionately; therefore the views of the population may not be represented completely from each program.

Delimitations

1. Participants of this study will be graduates of a NATA Accredited Post-Professional Athletic Training Education program.

2. All participants will have received a Master's degree from the program that they attended.
3. The sample population (n=106) have all graduated within the past two years, 2009 or 2010.

CHAPTER II

REVIEW OF LITERATURE

While there is limited research in post-professional athletic training education, it is important to understand the history of education in athletic training as it pertains to the development of post-professional athletic training education, specifically the development of the *Standards and Guidelines for the Development and Implementation of NATA Accredited Graduate Athletic Training Education Programs* (2002) and the implementation of specialty certifications and competencies into post-professional athletic training education. It is also important to explore other health care professions, such as nursing and physical therapy, to examine research specific to areas, like specialty certification within the profession and competencies within the educational programs. This review of literature will examine all of these related components.

History of Athletic Training Education

The National Athletic Trainers' Association (NATA) was founded in 1950 with a specific purpose to enhance the profession of athletic training (O'Shea, 1980). A few years later, in 1955, William E. Newell was appointed as the National Secretary of the NATA which later became known as the Executive Director. While in this role, Newell established the Committee on Gaining Recognition to achieve advancement in the profession of athletic training (O'Shea, 1980). In order to advance the profession, the committee developed a curriculum model that would help prepare students to become athletic trainers. This curriculum model included: anatomy, physiology, physiology of exercise, physical science, psychology, first aid, nutrition, organization and administration of health, and techniques of athletic training. In 1959, the curriculum was

approved by the NATA Board of Directors (Delforge & Behnke, 1999). This model had two main emphases: the secondary education teaching credential and the prerequisites needed for physical therapy school (O'Shea, 1980).

It was not until ten years later, in 1969, that the first undergraduate athletic training education program was recognized by the NATA (Delforge &Behnke, 1999). That same year, the Committee on Gaining Recognition became the Professional Advancement Committee and was divided into two subcommittees: the Subcommittee on Professional Education and the Subcommittee on Certification. The Subcommittee on Professional Education would then evolve into the NATA Professional Education Committee, and the Subcommittee on Certification would evolve into the NATA Certification Committee (Delforge &Behnke, 1999).

During the 1970s, some of the greatest gains in athletic training education occurred. The athletic training curriculum evolved, allowing students to study athletic training specifically and included clinical observation hours. The reason for revising the curriculum was to narrow the focus to what is most relevant to athletic training as a profession instead of preparing the students for physical therapy school (Delforge & Behnke, 1999). These revisions were included in the *Guidelines for Development and Implementation of NATA Approved Undergraduate Athletic Training Education Programs* (Delforge & Behnke, 1999). Also occurring in the 1970s, the Professional Education Committee formed a behavioral objective list for the courses of the new curriculum. In order to develop students' clinical skills, the committee developed a list of skills competencies. Another substantial gain in athletic training education occurred in

1972 when the NATA approved its first graduate-level athletic training education program (Delforge & Behnke, 1999).

In June of 1980, the NATA Board of Directors required all NATA approved undergraduate athletic training education programs to offer a major in athletic training by July 1, 1986 (Delforge & Behnke, 1999). The Professional Education Committee then developed a strategic plan for athletic training to become an approved major and changed the deadline to July 1, 1990. By 1983, the NATA revised the *Guidelines for Development and Implementation of the NATA Approved Undergraduate Athletic Training Education Programs* to include guidelines on the development of the undergraduate programs as a major (Delforge & Behnke, 1999). There were also changes made to the athletic training education curriculum during this time. With these changes, two major features merged. The first was an inclusion of specific subject matter rather than specific courses and the NATA *Competencies in Athletic Training* were developed (Delforge & Behnke, 1999).

In June 1990, athletic training was recognized as an allied health profession by the American Medical Association (AMA), marking a huge milestone for the profession. Recognition by the AMA meant that the entry-level programs could be accredited by the American Medical Association's Committee on Allied Health Education and Accreditation (CAHEA) (Delforge & Behnke, 1999). In October 1990, the CAHEA and NATA Professional Education Committee met to form a review committee. This committee would be responsible for reviewing all allied health education programs that were accredited through CAHEA (Delforge & Behnke, 1999).

In October 1990, the American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP) and, the American Orthopedic Society for

Sports Medicine (AOSSM) joined to form the Joint Review Committee on Educational Programs in Athletic Training (JRC-AT) (Delforge & Behnke, 1999). The JRC-AT was a committee on accreditation which fell under the jurisdiction of the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The JRC-AT was responsible for designing the *Standards for Entry-Level Athletic Training Educational Programs*, which provided the basis of entry level athletic training education through educational competencies and clinical proficiencies (Starkey, 2001).

In October 1992, the AMA established a free-standing accreditation agency for allied health education programs, which led to the disbandment of CAHEA. In July 1994, the AMA became a cosponsor of the CAAHEP, and the United States Department of Education recognized CAAHEP as an agency of accreditation for allied health education programs (NATA, 1993). The JRC-AT, which was a member of CAAHEP, was recognized by the Council on Higher Education Accreditation (CHEA) and was also a member of the Association of Specialized Professional Accreditors (ASPA). The JRC-AT was also recognized by the Association of Schools of Allied Health Professions (ASAHP) (CAATE, 2008).

The NATA then created the NATA Education Council, which took the place of the Professional Education Committee. The NATA Board of Directors also created an Education Task Force in 1994 to address educational issues that would carry the NATA into the 21st century, including reviewing athletic training education at undergraduate and graduate levels, as well as continuing education. Members of this task force included members of the Board of Certification (BOC), athletic training educators, and athletic trainers from curriculum and internship programs. This task force met its goals in 1997

and was disbanded shortly after. By the recommendations of this task force, the Education Council was formulated. Members of this council were appointed by the Board of Directors to focus on the educational preparation of athletic trainers (Delforge & Behnke, 1999). The work of the Board of Certification, Professional Education Committee, and Education Council has all provided crucial information in guiding the education and preparation for athletic trainers (Peer & Rakich, 2000).

As part of this task force, the *Standards and Guidelines for the Development and Implementation of NATA Accredited Graduate Athletic Training Education Programs* were developed in 1997. That same year, the Graduate Education Committee of the NATA Education Council was formed to establish the guidelines and standards for master's degree programs (Delforge & Behnke, 1999). This committee revised the *Standards and Guidelines for Development and Implementation of NATA-Accredited Post-Professional Graduate Athletic Training Education Programs* in May of 2002 (Henry et al, 2009).

In June 2006, the JRC-AT became independent from CAAHEP and transitioned to the Commission on Accreditation of Athletic Training Education (CAATE) with the responsibility for accrediting professional, or entry-level, athletic training education programs. The AAFP, the AAP, AOSSM, and the NATA became sponsors of the CAATE and developed the *Standards for Entry-Level Athletic Training Educational Programs* (CAATE, 2008).These standards include information about academic requirements for the accredited athletic training education programs and are reviewed periodically to ensure that the standards are current and relevant (CAATE, 2008). Within these standards are the NATA Educational Competencies and Clinical Proficiencies.

These competencies and clinical proficiencies are designed to standardize the educational content necessary for an entry-level athletic trainer (CAATE, 2008). Currently, the CAATE is responsible for the accreditation of approximately 360 professional athletic training education programs (CAATE, 2011).

NATA Accredited Post-Professional Athletic Training Programs

In athletic training, the post-professional graduate programs curricular content is more advanced when compared to undergraduate programs. These programs also continue to emphasize the development knowledge and skill beyond the entry level in both areas of athletic training and research (Wilkerson, et al., 2006). One of the major differences between the two programs is the participation in research projects and clinical experiences for practicing clinical skills as a credentialed health care provider (Wilkerson, et al., 2006). The NATA Post-Professional Education Committee has established characteristics for post-professional athletic training education. These characteristics include an emphasis on research, advanced theoretic knowledge, scholarship, and development of critical thinking skills (Seegmiller, 2006).

A large majority of athletic trainers (70%) hold a master's or terminal degree according to the NATA (NATA, 2009). These degrees include, but are not limited to, athletic training, education, exercise physiology, health care administration, counseling, and health promotion. Many athletic training students are advised each year to enroll in various master's degree programs that provide graduate assistantships as an athletic trainer based on three beliefs: 1) undergraduate athletic training education programs developed all the athletic training specific knowledge needed for professional practice, 2) a graduate assistantship is a good opportunity for professional advancement, and 3)

receiving a master's degree in an area outside of athletic training will help the student's qualifications (Wilkerson, et al., 2006).

While some athletic trainers choose to pursue a post-professional degree in an area of study outside of athletic training, there are programs that are accredited by the NATA with a specific focus in athletic training. As of December 2010, there are fifteen NATA Accredited Post-Professional Athletic Training Education programs that have received accreditation (A.T. Still University, University of Hawaii at Manoa, Illinois State University, Indiana State University, Indiana University, University of Kentucky, Michigan State University, Western Michigan University, University of North Carolina Chapel Hill, Ohio University, University of Oregon, California University of Pennsylvania, Temple University, Old Dominion University, and the University of Virginia) (NATA, 2011). Each of these programs follows the *Standards and Guidelines* (2002) established by the Graduate Education Committee. The *Standards and Guidelines* (2002) were formulated to encourage thought and empower post-professional program directors and institutions to develop the program specifically around the strengths and points of distinctiveness of the program (NATA, 2002). According to a report in 2005, 125 students graduated from 12 NATA Accredited Post-Professional Athletic Training Education programs, with an average of 10.4 graduates per program (NATA, 2006).

The NATA Graduate Education Committee and the Graduate Review Committee became the Post-Professional Education Committee and the Post-Professional Education Review Committee. The reason for the name change was to shift the philosophy and responsibility of the committees. The NATA Board of Directors gave the Post-Professional Education Committee the task of incorporating specialty certifications into

athletic training, including the work of the Specialty Certification Committee (Sauers, 2007).

Prior to the name change, the Graduate Education Committee was only in charge of the development of the *Standards and Guidelines* (NATA, 2002). The Graduate Review Committee was the review board on accreditation of post-professional athletic training education programs including reviewing self-study materials and conducting site visits. Because of the new role of including specialty certification, the Graduate Education Committee evolved into the Post-Professional Education Committee and began to investigate the needs of post-professional athletic training education (Sauers, 2007).

The Post-Professional Education Committee began to analyze other health care professions with post-professional education including medicine, nursing, pharmacy, physical therapy, occupational therapy, and physician assistant studies to find similarities while reviewing the current *Standards and Guidelines* (2002). They found that within these professions there was a value placed on post-professional education (Sauers, 2007). The PPEC also found that health care professions that include an advanced clinical training in an area of specialization are centered on issues pertaining to improving overall quality of patient care. There was also urgency from employment-based groups for post-professional athletic training education to help move athletic trainers into emerging settings, like industrial, corporate, and the hospital setting (Sauers, 2007). Currently, the Post-Professional Education Committee is revising the *Standards and Guidelines for Development and Implementation of NATA-Accredited Post-Professional Graduate Athletic Training Education Programs.*

Standards and Guidelines for NATA Accredited Post-Professional Athletic Training Education Programs

The Graduate Education Committee was given the task in 1997 to evaluate and revise the graduate program standards and guidelines and developed the *Standards and Guidelines for the NATA Accredited Post-Professional Athletic Education Programs*. In 1998, the NATA Graduate Review Committee was formed and responsible for evaluating accreditation status of post-professional graduate athletic training education programs. The *Standards and Guidelines* are periodically revised by the Post-Professional Education Committee, formerly known as the Graduate Education Committee and was most recently revised in 2002. These standards and guidelines apply to universities and colleges that are developing or maintaining NATA accreditation for their post-professional athletic training education programs (NATA, 2002).

According to the *Standards and Guidelines for Development of NATA-Accredited Post-Professional Graduate Athletic Training Education Programs* (NATA, 2002), the distinguishing characteristics of these programs include 1) instruction in advanced skills and knowledge, 2) the preparation of athletic trainers for leadership roles, and 3) a research experience. The post-professional athletic training education programs are designed to enhance the student's ability to function in a teaching setting, clinical setting, administrative role, and research environments (NATA, 2002). The *Standards and Guidelines* (NATA, 2002) is divided into seven sections. The first section of the document includes general information about the document as a whole, including specific information about what is included into each section. This section also includes information about the *Standards and Guidelines* as an advocacy document.

The second section of the *Standards and Guidelines* (NATA, 2002) includes information about the general principles of graduate education, philosophy of post-professional athletic training education, and principles of post-professional athletic training education. There are a total of six general principles for graduate education: mastery of subject matter, critical thinking, theoretical understanding, proficiency in research, service orientation, and diverse representation of perspectives.

The first principle is the mastery of subject matter. The subject matter in a post-professional athletic training education program should be beyond entry-level knowledge (NATA, 2002). The second principle is critical thinking. While attending the graduate program, the student should develop and refine their critical thinking skills as well their understanding of the assumptions of athletic training as a discipline. The third principle is theoretical understanding. The students of the graduate program will gain an understanding of the theoretical bases of the field of athletic training by rooting clinical performance and application based on theory. Students should understand theories within the field and incorporate those theories into their everyday practice as athletic trainers (NATA, 2002). The fourth principle in this section is proficiency in research. The students should develop skills involved in conducting research including good writing skills, the ability to express themselves creatively, and the ability to present personal insights. The fifth principle is service orientation. Students within the program should receive an education that will give the students a sense of responsibility to return the education that they have received to the larger community. The final principle is diverse representation of perspectives. Each program should provide both cultural and

intellectual experiences for the students. These experiences should be sensitive to both ethnic and cultural diversity (NATA, 2002).

This same section of the *Standards and Guidelines* also includes the philosophy of post-professional athletic training education programs. The overall mission of post-professional graduate athletic training education is to "expand the depth and breadth of the applied, experiential, and propositional knowledge and skills of entry level certified athletic trainers, expand the athletic training body of knowledge, and to disseminate new knowledge in the discipline (NATA, 2002, p.2)." This philosophy also includes advancement of the student's knowledge, understanding, competence, discovery, and inquiry. Finally, the overall principles of post-professional graduate athletic training education are included in this second section of the *Standards and Guidelines* (NATA, 2002). The three principles of graduate level athletic training education are advancement of skills and knowledge, preparation for the students as athletic trainers in leadership roles, and research experiences (NATA, 2002). Other principles include educational experiences in enhancing the student's capability to function in clinical, teaching, administrative, or research settings. No specific requirements regarding course offerings exist, thus providing programs the flexibility to develop the curriculum around the program's chosen points of distinctiveness (NATA, 2002)

The third section of the *Standards and Guidelines* (NATA, 2002) includes information on the post-professional athletic training education program development and implementation. The appointment of a program director (PD) is an integral part of developing a program. The PD is the program's contact between the program and the

Post-Professional Education Review Committee and the institution. Information on the position, qualifications, and responsibilities are included in section four of the document.

According to the *Standards and Guidelines* (NATA, 2002), the PPATEP must be compatible with the department or college in which the program is housed, including following the missions, goals, and objectives of the department. The points of distinctiveness should reflect the areas of strength of the personnel of the institution. Housing the PPATEP in the Department of Athletic training would be most advantageous (NATA, 2002). The mission, goals, and objectives should also correlate with the program's points of distinctiveness. Based on the mission, goals, and objectives of the PPATEP, the proper personnel, classroom, equipment, and laboratory space are necessary to provide optimal learning opportunities for the students. The program must have adequate resources to meet the goals and objectives. Ongoing assessments of these are important in keeping the program current (NATA, 2002).

The next section of the *Standards and Guidelines* (NATA, 2002) includes information on the curriculum. The curriculum should be developed around the graduate athletic training education program's mission, goals, philosophy, and points of distinctiveness. The curriculum should also be based on the faculty's area of expertise and resources that are available. Clinical experience is optional but is part of most accredited post-professional athletic training education programs (NATA, 2002). If it is present, it must be incorporated into the curriculum to enhance and refine the clinical skills of the students. A research component is required to deepen the students understanding of the athletic training profession as well as enhance writing, speaking, and critical thinking skills.

The fourth section of the *Standards and Guidelines* (NATA, 2002) includes detailed information about the program standards and guidelines. All standards mentioned in the documents are mandatory parts of the program and are designated by the verb "must," whereas guidelines are recommended parts of the program and area designated by the verb "should." According to the *Standards and Guidelines*, each program must have a mission statement that corresponds with the mission statement of the department or college that the program falls under (NATA, 2002). Even though goals and objectives will vary between programs, each program must identify the program's points of distinctiveness, which are related to the faculty as well as the academic courses. Each of the programs must also have long and short term goals that relate to the program's points of distinctiveness. The goals and objectives must address four other issues. The first is an increased depth of understanding of athletic training issues beyond those of an entry-level athletic trainer. This can be done by delving deeper into subject matter or addressing new issues and information in the field of athletic training.

The goals and objectives must also enhance the student's critical thinking skills, develop the student's understanding of theory in athletic training, enhance the student's ability to discover knowledge, prepare the students for leadership roles, and give the students the feeling of responsibility to help the profession and community with their knowledge. Each program must have a plan on how to achieve the goals and objectives and well as evidence that they did achieve them. This section of the *Standards and Guidelines* (NATA, 2002) also includes the degree designation and transcript information. The program is strongly encouraged to grant a Master's degree to graduates

in athletic training. The words "athletic training" need to appear on the official transcripts as a major, specialization, concentration, emphasis or track.

The Standards and Guidelines (NATA, 2002) also include information specific to the personnel of the program. The program director must be appointed at least one year before the program is implemented. The program director must also be appointed two years before a site visit can occur. He or she must also be a full time employee and a graduate faculty member of the college or university. The program director position should also be a tenure track position. The responsibilities of the program director are also laid out in this section of the *Standards and Guidelines* (2002). These responsibilities include overseeing of day to day operations of the program as well as coordination and evaluation of the program. The program director must also have up to date records that can be analyzed. There are also specific qualifications for the program director. The program direct must have a terminal degree and be an athletic trainer with at least three years teaching and research experience. Another qualification is that the program director must have a strong academic interest and background and have ongoing involvement in research in the athletic training field and be published.

An important part of this section of the *Standards and Guidelines* (NATA, 2002) is the curriculum. The course load and subject matter should reflect the faculty members' areas of interests and expertise as well as available resources at the institution with a majority of the course work related to athletic training. Since research is a required component of the program, courses must reflect this. The faculty of the program should be involved in the research of the students to serve as mentors and role models.

Even though clinical experience is not required for the NATA Accredited Post-Professional Athletic Training Education Programs, the *Standards and Guidelines* (NATA, 2002) address it. If the program has a clinical experience component of the program, the program must have a plan for the organization and structuring of the clinical experience of the students. This is so that the students will be receiving educational experience and not just placed in their positions as a form of work force. The affiliated sites that are used for the clinical experience must have a formal written document for the clinical education plan for the students at the clinical site. There should be communication between the supervisors and the program directors to ensure the students are gaining experience (NATA, 2002).

This section of the *Standards and Guidelines* (NATA, 2002) also includes prospective student recruitment and selection. The program must be accurately described on all recruitment materials, including websites and pamphlets. If the program is offering the student any financial benefits, it must be given to the student in writing prior to the student committing to the program. In order to accept a student into the program, the student must have applied in a written form, be BOC certified or eligible, have at least a baccalaureate degree from a CAATE accredited undergraduate program, and have been admitted into the graduate school of the college or university. Equal opportunity and diversity are also included in this section of the *Standards and Guidelines* (NATA, 2002). All aspects of the program must be non-discriminatory including recruitment of both students and faculty.

Program evaluation is also addressed in the *Standards and Guidelines* (NATA, 2002). This is included because the cornerstone for success of the PPATEP is the

ongoing evaluation of the program. The program must have a formal plan for evaluation and then analyze the results of the evaluations. The results should be used to help make any changes that can strengthen the program. There must be an evaluation of student satisfaction of the program and the evaluation must be completed on a regular basis. This information should be shared with the students of the program (NATA, 2002).

Similar to professional programs, the NATA Accredited Post-Professional Athletic Training Education Programs have to go through an accreditation process. The NATA is the accrediting body; unlike professional programs where CAATE is the accrediting body. According to the *Standards and Guidelines* (NATA, 2002) the accreditation process is composed of three activities. The first is the development of a self-study which includes the program submitting a self-study report to the NATA Post-Professional Education Review Committee. According to the *Standards and Guidelines* (2002) the Post-Professional Education Review Committee (PPERC) is a committee within the NATA Education Council in charge of reviewing the post-professional graduate athletic training education programs as well as making any recommendations for accreditation to the NATA Board of Directors. The goal of the PPERC is to strengthen the profession of athletic training by strengthening the professional within (Hunt, 2006).

The second activity in the accreditation process is a site visit and peer review of the study and institution. This requires an analysis of all aspects of the program as well as critically examining the program. The final activity is the decision by Post-Professional Education Review Committee and the NATA Board of Directors. The program is judged on the program's effectiveness in relationship to its missions, goals, and philosophies,

strengths and weaknesses, and a plan for any changes or modifications that need to be made. The decision can be to accredit, accredit with conditions, or deny accreditation.

The *Standards and Guidelines* (NATA, 2002) also has a section on accreditation. The overall accreditation process is set up by the Post-Professional Education Review Committee. The accreditation is based on this document as well as the *Pursing and Maintaining Accreditation of Post-Certification Graduate Athletic Training Education Programs* (NATA, 2007). All accreditation is voluntary. Programs that gain accreditation must present a self-study, go through peer review, and must be compliant with the *Standards and Guidelines* (2002). Maximum accreditation for programs is five years and decisions of the Post-Professional Education Review Committee can be appealed by the institution (NATA, 2002).

Points of Distinctiveness in Post-Professional Athletic Training Education

According to the *Standards and Guidelines* (NATA, 2002), each NATA accredited post-professional athletic training education programs must establish points of distinctiveness. Points of distinctiveness are interest areas of the program that guide and focus the program, including the curriculum, clinical, and research aspects of the program. Since there are no specific course requirements, the curriculum should be centered on the program's points of distinctiveness and relate to the areas of focus of the institution and faculty. Since there are no specific guidelines on what the program's points of distinctiveness should be, they across the NATA accredited post-professional athletic training education programs (Appendix A). Some program's points of distinctiveness are very specific, such as rural health care and electrically induced muscle

cramps, while others are very general, like an interdisciplinary research experience and advanced clinical skills.

The *Standards and Guidelines* (NATA, 2002) reflect a shift in the emphasis of the programs that now promotes diversity of the curricular content as well as clinical experiences due to the points of distinctiveness that the programs identify (Wilkerson et al, 2006). When the Standards *and Guidelines* (NATA, 2002) were revised in 2002, they became more focused on encouraging thought and empowering post-professional program directors and institutions to develop the program specifically around the strengths and points of distinctiveness of the program.

Specialty Certifications

According to Neibert (2009), specialization is a way to increase professionalism in a profession. Specialization can allow the program to have its own specialty certification, which will then allow the graduates of the program to become experts in the specific field and help add to professionalism in athletic training. Recently, there has been a development of post-professional programs, such as residency training programs, to encourage programs to have unique, focused specialized areas. This can help to broaden the athletic training field as a profession and help increase professionalism (Neibert, 2009).

The concept of specialty certification was introduced to the members of the National Athletic Trainer's Association in the December 2002 *NATA News*. In this issue, a survey from the NATA Education Council found that 88% of the respondents were interested in specialty certifications in athletic training. The top reason for this was to improve marketability followed by an improved job performance. Over 80% of

administrators felt that specialty certifications would provide credibility to the athletic trainer. Administrators said they were 78 percent more likely to hire an athletic trainer with a specialty certification, and 69.7% would be willing to increase the pay of athletic trainers that hold a specialty certification (Wiksten & Berry, 2004).

Specialty certifications must go beyond entry level athletic training and be developed in an interdisciplinary curriculum (Wiksten & Berry, 2004). These specialty certifications should be in areas relevant across a variety of employment settings for athletic trainers. According to Wiksten and Berry (2004), the former Specialty Certification Committee was investigating the implementation of two routes to a specialty certification: an athletic training graduate education program or an individual educational program. Both programs would involve a specified experience in the area of specialty and academic program, and will be standardized by the Specialty Certification Committee. To obtain the certification, an examination based credential is required as well as continuing education requirements, similar to what athletic trainers have to do to become certified and maintain certification (Wiksten & Berry, 2004).

Until recently, there has only been only been one route for formal post-professional education in athletic training which included attending one of the NATA accredited post-professional athletic training education programs. Some of these programs have existed for over 30 years, but there has been no overall consensus on developing specialty areas. While each program has points of distinctiveness, there are no specialty certifications. The Post-Professional Education Committee looked to develop clinical training programs that help athletic trainers prepare for the advancement of the specialty certification (Sauers, 2007). Currently, the Post-Professional Education

Committee is evaluating the current post-professional athletic training education standards and guidelines to see if changes can be made to adopt specialty certifications. The addition of preparing clinical specialization between post-professional graduate degree programs and residency programs will add and support the development of specialty certifications (Sauers, 2007). The development of specialty certifications could play a major role in the future of post-professional athletic training education (Sauers, 2007). With the evolution of health care, athlete trainers are seeking to validate their special areas of knowledge gained from continuing education in the form of a specialty certification. Specialty certifications in athletic training could validate that the athletic trainer has an advanced knowledge level in the specific area of practice and skills to increase the quality of patient care and to enhance the athletic trainer credential (Sauers, 2007).

While there is little research specific to the specialty certifications in PPATEPs, similar health care professions have examined specialty certifications. For example, in the field of nursing, a registered nurse can gain his or her specialty certification in a wide variety of areas (ABNS, 2009). Examples for areas available for specialty certification are: adult nurse practitioner, pediatric clinical nurse specialist, gerontology clinical nurse specialist, and pain management (ABNS, 2009). The American Board of Nursing Specialties (ABNS) was founded in 1991 with the mission to promote the values of specialty certification in nursing, and specialty certification in nursing is seen as the standard in care for which the public sees as quality nursing (ABNS, 2009). The ABNS believes that because of increasing patient needs, these needs will be best met by registered nurses with specialty certifications (ABNS, 2005). According to a study

conducted by the ABNS, a specialty certification enhances personal accomplishment, shows professional commitment, enhances the profession's credibility, and provides personal satisfaction (ABNS, 2006).

In the field of physical therapy, the American Board of Physical Therapy Specialties (ABPTS) is the board that oversees the specialty certification process. The mission of the ABPTS is to improve over all public health care by enhancing the clinical excellence in physical therapy by having specialty certifications (APTA, 2009a). The specialty certification program in physical therapy began in 1978 and allows physical therapists to build upon their broad base of entry level knowledge to develop a greater depth of knowledge in a particular area of study. This program was established to give formal recognition for the physical therapists with advanced clinical knowledge and skills in a specific area. Areas available for specialty certification are: cardiopulmonary, clinical electrophysiology, geriatric, neurological, orthopedic, pediatric sports, and women's health (APTA, 2009b).According to the American Board of Physical Therapy Specialties, as of 2010, there are 10,348 physical therapists with clinical specialty certifications. Orthopedics held the highest number of clinical specialty certifications with 6,157, followed by geriatrics with 1,109, and pediatrics with 1,011 (ABSPT, 2011).

A survey conducted by the ABPTS found that clinicians who held specialty certifications reported an increased amount of time conducting research, teaching, and participating in professional activities (ABPTS, 2011). Of these clinicians, 43% felt that by having a specialty certification, they had new job opportunities and found an increased opportunity to take on professional responsibility (ABPTS, 2011). Three-fourths of the clinicians felt that the specialty certification had a positive effect on patient care. There

was also an increase in self-confidence and personal achievement in those clinicians with a specialty certification (ABPTS, 2011).

Competencies in Allied Health Education

The Institute of Medicine (IOM) identified five core competencies for graduate education for medicine, nursing, pharmacy, and selected allied health care professions. These five core competencies include: provide patient-centered care, employ evidence-based practice, work in interdisciplinary teams, apply quality improvement, and utilize informatics (IOM, 2003). In order to evaluate if these competencies are being incorporated into a program, it is important to evaluate how and when these competencies are taught in these academic programs. Similar competencies are addressed by the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS).These five competencies are not discipline-specific because each health care profession is unique. These competencies are meant to be modified to best help clinicians in the health care profession (IOM, 2003).

The six competencies approved by the NATA Board of Directors for post-professional athletic training education programs are based on the five competencies established by these three groups. The competencies have also been adapted to athletic training and post-professional programs and include a new competency, for a total of six competencies. The six competencies are: 1) patient-centered care, 2) interdisciplinary collaboration, 3) evidence-based practice, 4) quality improvement, 5) use of healthcare informatics, and 6) professionalism (NATA, 2010).

Patient-centered care encompasses the promotion, education, and collaboration to develop a treatment plan with the patient's best interest as the priority. A clinician who

practices patient-centered care informs and educates the patient in a compassionate manner. Students in post-professional programs should be able to serve as an advocate for the patient as well as educate the patient about health-related topics and concerns (NATA, 2010). Interdisciplinary collaboration includes the ability of a clinician to work with other health-care professionals to formulate the best plan of treatment for the patient. It was much more important for this to occur than to establish differences and abilities between clinicians and professions. It is crucial for an athlete trainer to collaborate with other health care professionals to improve the quality of care for the patients (NATA, 2010). As students in a PPATEP, students have the opportunity to work with other health care professionals and other athletic trainers through clinical experiences. During these experiences, it is imperative that the student learns how to work and collaborate with other medical professionals. Ultimately, the athletic trainer should be focusing on the patient, as established in the first competency, and that includes working with other health care professionals to provide the most effective treatment.

Evidence-based practice is not a new concept within athletic training, but there has been a recent push with the inclusion of competencies of evidence-based practice in professional athletic training education (NATA, 2011). This practice includes the best research evidence and clinical experiences/expertise in the decision making of the patient's care. Athletic trainers must have the ability to integrate the best research findings into their practice to become better and more efficient athletic trainers (NATA, 2010). With the inclusion of concepts of evidence-based practice into the competencies for professional athletic training education, it is important at the post-professional level to

expand on these concepts and introduce more advanced components of evidence-based practice to the students.

Quality improvement originated in industrial manufacturing to minimize waste being produced and decrease employee errors while increasing efficiency and quality of care (NATA, 2010). In athletic training, quality improvement should be patient-centered as well as self-centered. Athletic trainers must have the ability to perform self-assessments and become life-long learners. They must not only be able to detect areas for improvement but be able to makes changes and implement these changes (NATA, 2010).

With an increase in the use of technology in the health care profession, athletic trainers must understand the new trend in technology and how to adopt the use of healthcare informatics into their practice.. Athletic trainers should be able to secure patient files and communicate with other health care professionals using new technology. This also includes the ability of athletic trainers to obtain the most recent evidence of patient care, which may be one of the most important issues within healthcare informatics (NATA, 2010). According to the Institute of Medicine (IOM, 2003), health care professionals should be able to perform four tasks with the use of health care informatics: reduce errors, manage knowledge and information, make decisions, and communicate more effectively. The use of healthcare information systems has been shown to increase the safety of patients (IOM, 2003). The use of computerized medical records has replaced hand-written SOAP notes and patient records for many athletic trainers.

The last competency is professionalism. Professionalism includes personal qualities like honesty, accountability, reliability, patience, modesty, and self-control. It is shown through respect towards others, ethical behavior based on the NATA *Code of*

Ethics and Board of Certification *Standards of Practice*, compassion, appropriate dress, and many others (NATA, 2010).

Summary

The history of athletic training can be traced back to the 1950s and the establishment of the educational model. There have been many changes at both the professional and post-professional education levels since their inceptions. Post-professional education is rapidly evolving. It is important to study the programs and graduates of the programs to ensure that post-professional athletic training education is meeting the standards to help advance the profession of athletic training.

Points of distinctiveness are major areas of focus of post-professional athletic training education programs that should be evaluated. These PODs should be carefully developed to ensure that they match the goals of the institution and faculty to optimize the learning experience the students have while in the PPATEP. It is also important to study new issues and ideas within post-professional athletic training education, such as the inclusion of specialty certifications and competencies, to understand how these issues and ideas can benefit the programs, students, and the profession.

CHAPTER III

METHODOLOGY

Subject Characteristics

Participants included 65 female and 41 male (n=106, age=25.35±2.03) graduates (May 2009-May 2010) of the sixteen NATA Post-Professional Athletic Training Education Programs, as of November 2010 (Table 1). The total available population was 307 graduates according to Post-Professional Education Review Committee records, however, the e-mail addresses for 40 of those subjects were either not accurate or were unable to be obtained. Therefore, the overall number of survey recipients was 267 (118 graduates from 2009 and 149 graduates from 2010), and the number of subjects to respond to the survey was 106 (50 graduates from 2009 and 56 graduates from 2010), yielding a 39.70% response rate. Consent for participation was assumed based upon completion and submission of the survey. This study was approved by the College Human Investigation Committee at the University.

Instrumentation

An online survey (Appendix B) was constructed utilizing Inquisite 9.5 Corporate Survey Builder (Catapult Systems, Austin, TX) to collect the data. Questions included in the survey were content-specific questions to assess the student's level of satisfaction on the advancement of their knowledge about the program's points of distinctiveness as well as how these points of distinctness are incorporated into the curriculum. Each programs' points of distinctiveness were collected from the NATA website (http://www.nata.org/education/educational-programs/accredited-programs), which was updated in the fall of 2009. Questions based on the new competencies being

implemented by the Post-Professional Education Committee were included. The survey included both closed and open-ended questions. Open-ended statements included asking graduates to comment on reasons why they were not extremely satisfied with the advancement of knowledge and skill in the area of the program's points of distinctiveness. Closed-ended statements were answered by using a Likert Scale format with five answers [extremely satisfied (5), very satisfied (4), satisfied (3), very dissatisfied (2), and extremely dissatisfied (1)]. The majority of the survey questions were original questions, but some questions were adapted from various surveys (AT Still Alumni Survey).

Face and content validity of this survey was assessed by a panel of three experts in the area of athletic training through a validity scoring form. Survey questions were evaluated by the panel of three experts in athletic training education through a validity scoring rubric (Appendix B). Each question was given a score of 1-3 (1= question is poor and needs to be removed, 2 = question that will be acceptable once revised, and 3 = question is good and should remain in the survey as written) and additional comments were provided on the questions. Questions were also asked about the estimated time length to complete the survey and where to place the demographic questions. After the validity scoring rubric was returned from each expert, questions were evaluated and modified by the researchers. The survey was then again sent to the panel for another evaluation and additional modifications were made based on feedback on the validity scoring sheet.

Once the survey was complete, it was sent to current students in a PPATEP for assessment of question clarity and consistency of survey. Students were asked to provide feedback to the researchers and modifications were made as needed.

Testing Procedures

A list of all the names of the graduates from May 2009 to May 2010 of the sixteen accredited programs was gathered from the NATA Post-Professional Education Review Committee administrative office. Graduates were then contacted via e-mail that was collected through the NATA Online Member Directory Database. Each graduate received a letter (Appendix C) via e-mail that included the overall purpose and importance of the research study, consent statement, estimated completion time, the link for the survey, and a request for their help and participation. The e-mail also provided contact information of the researchers for comments or questions that concerned either the research study of the survey instrument.

Data collection occurred over a four week period (Turocy, 2002). The first attempt to send recruitment e-mails was unsuccessful due to a malfunction of the survey hyperlink. Correction e-mails (Appendix D) were sent to graduates who had received a recruitment e-mail to let them know that there was an error and a new hyperlink would be sent out. Follow up e-mails (Appendix F) were sent to the graduates with another copy of the survey, a shortened cover letter, and return date at the end of each week for four weeks. All participants who returned e-mails reporting that they completed the survey were thanked.

When the participant opened the survey hyperlink, a description of the survey was given and the participant was then asked to select the PPATEP that they graduate from.

They were then sent to the survey questions that were specific to the program's PODs. Each participant was shown the program's POD and then was directed to the survey questions. Some questions of the survey were specific to each point of distinctiveness. For these questions, the specific POD was shown within the question.

Once the survey was completed, the information was sent to the University password protected data base system. These results were then formatted to Statistical Package for Social Sciences (SPSS) version 16.0 (SPSS Inc, Chicago, IL). At the end of the survey, participants were given the opportunity to request survey results as well as enter the chance to win one of two 25 dollar Visa Check Cards.

Data Analysis

Upon receipt of the participants' response, the data were compiled and analyzed. The data was analyzed using Statistical Package for Social Sciences (SPSS) version 16.0 (SPSS Inc, Chicago, IL). Descriptive statistics (means, standard deviation, minimum, and maximum) were gathered and analyzed for questions about level of satisfaction, influence, confidence, and likelihood. Frequency statistics were determined and analyzed for questions about mechanisms of emphasis and competencies related to points of distinctiveness.

In order to determine the graduates' overall level of satisfaction score with the program's ability to advance their knowledge in the areas of the points of distinctiveness, the mean level of satisfaction was calculated for each participant by summating the satisfaction scores for each of the points of distinctiveness and then dividing it by the total number of points of distinctiveness that the program had. The sample mean was then

calculated by summating the participant mean level of satisfaction and dividing it by the total number of participants.

Graduates were given four mechanisms (faculty expertise, academic courses, research emphasis, and clinical experience) through which the program's points of distinctiveness should be emphasized based on the post-professional standards and guidelines. They were asked to rate the level of emphasis for each mechanism on a scale of zero to three (0 = no emphasis, 1 = slight emphasis, 2= moderate emphasis, 3 = strong emphasis) for each for the program's points of distinctiveness. For each mechanism of emphasis, the level of emphasis was calculated by recording the number of times participants selected no emphasis, slight emphasis, moderate emphasis or strong emphasis for each point of distinctiveness. The levels of emphasis for each mechanism were then summated across each program and divided by the number of times the level of emphasis could be selected (362) for each mechanism to determine the percentage of the level of emphasis for each mechanism. The total possible selection frequency was found by multiplying the number of participants from each program by the total number of points of distinctiveness the program had.

Data collected for competencies was calculated by graduates selecting all the competencies that applied to the specific point of distinctiveness. Each time a competency (patient-centered care, interdisciplinary collaboration, evidence-based practice, quality improvement, use of healthcare informatics, professionalism, or no competency is related to this POD) was selected, the frequency was recorded and was then divided by the total number of times the competency could have been selected (362) to determine the selection percentage.

In order to determine likelihood of the program's points of distinctiveness to become a specialty certification, the mean likelihood was calculated by summating the likelihood scores for each participant for all of the program's points of distinctiveness and then dividing it by the total number of points of distinctiveness that the program had. The sample mean was then calculated by summating the participant mean likelihood and dividing it by the total number of participants.

The level of confidence in identifying the program's points of distinctiveness, level of influence of the program's point of distinctiveness on the graduate's decision to apply to jobs, and level of influence of the program's points of distinctiveness on the graduate's decision to apply to the PPATEP was determined by summating each graduate's score and dividing it by the total number of participants.

Table 1. Participant Demographic Descriptive Data

Demographic		N=106
Age (years)		25.35±2.03
Gender		
	Male	41
	Female	65
Graduation Year		
	2009	50
	2010	56
Program Length		
	1 year	27
	2 years	79

CHAPTER IV

RESULTS

Demographic survey questions were analyzed using descriptive statistics to determine means, standard deviations, percentages, and frequencies. Means and standard deviations were reported for all demographic characteristics (Table 1). Frequency values were reported for the number of participants from each PATEP (Table 2) and for questions specific to each PATEP's points of distinctiveness (Appendix H).

Graduates reported that they were very satisfied (M= 4.36/5.00, SD= 0.62) with the program's ability to advance their knowledge and skill in the areas of the points of distinctiveness (Table 3 and 4). Graduates reported that the program's points of distinctiveness were emphasized strongly through each mechanism (Table 5). Faculty expertise (70.99%) had the strongest level of emphasis, followed by research emphasis (52.76%), academic courses (50.28%), and clinical experience (45.86%).

When examining which competencies were related to the program's points of distinctiveness, many graduates reported that these competencies were already incorporated to the program's points of distinctiveness (Table 6). Evidence-based practice (80.66%) had the highest selection frequency, followed by quality improvement (72.65%), patient-centered care and professionalism (70.44%), interdisciplinary collaboration (69.61%), and health-care informatics (62.71%). Graduates also reported that the program's points of distinctiveness were likely (M= 3.16/5.00, SD= 0.85) to develop into a specialty certification (Table 7).

Graduates reported that the program's points of distinctiveness were influential (M= 3.56/5.00, SD= 1.42) on their decision to apply to the program. Data for this

question was missing for seven participants (Table 8).Graduates also reported that the program's points of distinctiveness were influential (*M*=3.28/5.00, *SD*=0. 97) on choosing which jobs positions they applied to (Table 9). Graduates reported that they were confident (*M*=3.69/5.00, *SD*=0.93) in identifying their PPATEP's points of distinctiveness prior to the survey (Table 10).

Table 2. Distribution of Responses from the 16 NATA Accredited Post-Professional Athletic Training Education Programs

Institution	N	Number of PODs
A.T. Still University	10 (9.4%)	3
San Jose State University	5 (4.7%)	4
University of Hawaii at Manoa	1 (0.9%)	3
Illinois State University	2 (1.9%)	2
Indiana State University	2 (1.9%)	5
Indiana University	5 (4.7%)	2
University of Kentucky	7 (6.6%)	2
Michigan State University	7 (6.6%)	3
Western Michigan University	6 (5.7%)	3
University of North Carolina-Chapel Hill	4 (3.8%)	3
Ohio University	10 (9.4%)	6
University of Oregon	6 (5.7%)	3
California University of Pennsylvania	11 (10.4%)	4
Temple University	3 (2.8%)	3
Old Dominion University	19 (17.9%)	3
University of Virginia	8 (7.5%)	4
Total	106	53

Table 3. Mean Level of Satisfaction in Program's Ability to Advance the Graduate's Knowledge and Skill in the Specific Areas of the Program's Points of Distinctiveness

Program	Number of POD	Mean Level of Satisfaction	Standard Deviation
A.T. Still University	3	4.85	0.23
San Jose State University	4	3.45	0.69
University of Hawaii at Manoa	3	5.00	0.00
Illinois State University	2	4.00	0.71
Indiana State University	5	4.80	0.28
Indiana University	2	4.60	0.42
University of Kentucky	2	4.86	0.38
Michigan State University	3	4.17	0.62
Western Michigan University	3	4.06	0.49
University of North Carolina-Chapel Hill	3	3.83	0.64
Ohio University	6	4.02	0.77
University of Oregon	3	4.61	0.44
California University of Pennsylvania	4	4.25	0.55
Temple University	3	3.89	0.77
Old Dominion University	3	4.37	0.53
University of Virginia	4	4.72	0.45

Table 4. Level of Satisfaction in Program's Ability to Advance the Graduate's Knowledge and Skill in the Specific Areas of the Program's Points of Distinctiveness

	N=106	Percentage
Extremely Satisfied	31	29.15%
Very Satisfied	55	50.09%
Satisfied	19	17.92%
Very Dissatisfied	2	1.89%
Extremely Dissatisfied	0	0.00%

Table 5. Level of Emphasis for Mechanism of Emphasis

Level of Emphasis	Faculty Experience		Academic Courses		Research Emphasis		Clinical Experience	
	Selection Frequency							
Strong	257	79.99%	182	50.28%	191	52.76%	166	45.86%
Moderate	72	19.89%	119	32.87%	90	24.86%	117	32.32%
Slight	29	8.01%	55	15.19%	70	19.34%	64	17.68%
No	4	1.10%	6	1.66%	11	3.04%	15	4.14%

Table 6.Competency Related to Program's Points of Distinctiveness

Competency	**Selection Frequency** (362)
Patient-Centered Care	255
Interdisciplinary Collaboration	252
Evidence-Based Practice	292
Quality Improvement	263
Healthcare Informatics	227
Professionalism	255
No Competency Related	11

Table 7. Likelihood of Program's Points of Distinctiveness Developing into a Specialty Certification

	N=106	Percentage
Extremely Likely	4	3.77%
Very Likely	21	19.81%
Likely	40	37.74%
Very Unlikely	39	36.79%
Extremely Unlikely	2	1.89%

Table 8. Level of Influence of Program's Points of Distinctiveness on the Graduate's Decision to Apply to the PPATEP

	N=106	Percentage
Extremely Influential	12	11.32%
Very Influential	31	29.25%
Influential	40	37.74%
Very Non-Influential	21	19.81%
Extremely Non- Influential	2	1.89%

Table 9. Level of Influence of the Program's Points of Distinctiveness on Jobs Graduates Applied to

	N=99*	Percentage
Extremely Influential	19	19.19%
Very Influential	37	37.37%
Influential	25	25.25%
Very Non-Influential	16	16.16%
Extremely Non- Influential	2	2.20%

*Data missing for seven participants

Table 10. Level of Confidence in Identifying Program's Points of Distinctiveness Prior to the Survey

	N=106	Percentage
Extremely Confident	22	20.76%
Very Confident	40	37.74%
Confident	34	32.08%
Very Unconfident	9	0.08%
Extremely Unconfident	1	0.01%

CHAPTER V

DISCUSSION

Points of Distinctiveness

We examined the current state of post-professional athletic training education, specifically focusing on program's points of distinctiveness, as there are no previous studies within this area. According to the *Standards and Guidelines* (NATA, 2002), points of distinctiveness are specific areas of interest of the program that guide and focus the program. As no specific course requirements exist in PPATEP, the curriculum should be centered on the program's points of distinctiveness and should also be related to the program's clinical education and research components. These points of distinctiveness should reflect the goals, mission, and resources of the institution and must be established by each program. It is because of these guidelines that the program's points of distinctiveness vary greatly across programs. Programs have the autonomy to choose their POD. Similarly, in graduate nursing education, programs also vary by curriculum, clinical experiences, and education experiences (Radzyminski, 2005).

The mission of post-profession athletic training education is focused around expanding knowledge within the field of athletic training to the students of the program (NATA, 2002). In master's level nursing education programs, students should be gaining knowledge from the program which builds upon and is more advanced when comparing it to the knowledge and skills learned during their undergraduate education (Cotterill-Walker, 2011; Kimball and O'Neil, 2002; Ashworth, Gerrish, and McManus, 2001). Since the programs are required to establish points of distinctiveness that guide and focus the curricular, clinical, and research components of the educational experience of the

student, graduates should be leaving the program with an advanced and expanded knowledge and skills in the areas of the points of distinctiveness. Therefore this assessment of this component is essential in order to determine if post-professional programming is indeed accomplishing what is intended.

We found that graduates were very satisfied with the program's ability to advance their knowledge and skill in the areas of the program's points of distinctiveness. According to Whyte, Lugton, and Fewcett (2000), post-professional studies in nursing allow students to reflect on their new knowledge and then include their new knowledge into their clinical practice. This also pertains to post-professional athletic training education as graduates should be taking the knowledge and skills learned during their time in the program and apply it to their clinical knowledge to advance themselves clinically. Since the program's points of distinctiveness are intended to guide and lead the program and ultimately, it is in these areas that the students are gaining advanced knowledge and skills, students should be choosing which PPATEP they apply to based on the program's unique points of distinctiveness. These PODs should be utilized as marketing points for the programs. By having unique points of distinctiveness, the students have an opportunity for an experience that will enhance their knowledge and skill as an athletic trainer.

Mechanism of Emphasis

According to the *Standards and Guidelines* (NATA, 2002) points of distinctiveness must be related to the faculty, academic courses, clinical experience, teaching, administrative, and/or research components. Graduates felt that the program's points of distinctiveness were emphasized strongly through all four mechanisms (faculty

expertise, academic courses, research emphasis, and clinical experience). Since each program has the autonomy to establish the program's POD, mechanisms of emphasis may also vary. For this reason, it is important that each program understand where the students feel there is the most emphasis for each POD.

Specialty Certification

No other health care profession has points of distinctiveness in graduate level education, however, other health care professions have specialty certification, as seen within nursing and physical therapy. In nursing, the American Board of Nursing Specialties (ABNS) believes that the best way to help meet patient needs is to receive treatment and care from nurses who have specialty certification (ABNS, 2005). According to Leak and Spruill (Leak & Spruill, 2008), specialty certification can help to increase personal achievement and satisfaction in nurses who receive a specialty certification. They are associated with greater nurse job satisfaction, increased accountability, and increased confidence in decision making skills. A study by the ABNS (ABNS, 2006) showed that 86% of nurse managers preferred to hire a nurse with a specialty certification, because they have validated knowledge within a specific area. The nurse managers also commented that nurses who held specialty certifications had an increased professional commitment to learning, showed greater informal and formal leadership skills, served as better mentors, and were more likely to serve as committee members. All of these findings could potentially translate to athletic training if specialty certifications were adopted.

In physical therapy, the American Board of Physical Therapy Specialties (ABPTS) believes the reasoning for specialty certification in physical therapy is to help

to improve overall public health care by enhancing the clinical standards and excellence. Specialty certification allows formal recognition to physical therapists with an advanced clinical knowledge and skill in a specific area (APTA, 2009). A study by the ABPTS (2011) found that physical therapists that held a specialty certification increased their amount of time conducting research, teaching, and participating in professional activities. They also had an increased feeling of self-confidence and personal achievement and found new job opportunities. Most importantly, they found that there was a positive effect on patient care (ABPTS, 2011). In athletic training, patient care should be one of the main outcomes that should be monitored. If specialty certification in physical therapy had a positive effect on patient care, this could easily translate to athletic training as we are treating many of the same types of patients.

The idea of incorporating specialty certifications into athletic training is not a new one. It was first introduced to the members of the NATA in the December 2002 issue of the NATA News (Wiksten & Berry, 2004). A survey was conducted on the NATA's Education Council website of the NATA membership. The feedback of this study showed that 88% of the survey respondents were interested in specialty certification in athletic training. The number one reason members were interested in specialty certification was to improve their marketability as an athletic trainer, closely followed by an improvement in job performance. Administrators noted that obtaining a specialty certification would add credibility to the athletic training profession and they would be more likely to hire an athletic trainer with a specialty certification and pay them more (Wiksten & Berry, 2004).

Graduates believed that their program's points of distinctiveness were likely to develop into a special certification. There is a potential for students who graduate from

PPATEPs to obtain specialty certifications if specialty certification do become a part of the profession of athletic training. This could be a unique component to post-professional athletic training education, but there would still have to be opportunities for athletic trainers that do not attend PPATEPs to obtain a special certification. In nursing and physical therapy, separate governing bodies regulate specialty certifications. Neither requires an advanced degree in the area of the specialty certification, only completion of a course and an examination.

With the inclusion of specialty certifications into athletic training, there are potential barriers that may be present. In a survey by Byrne, Valentine, and Carter (2004) of perioperative nurses, these nurses believed that specialty certifications were important and valuable to their profession, but they also found barriers that deterred them from obtaining a specialty certification, including the cost of exam and maintaining the credential, lack of institutional support and reward, lack of time to prepare for the exam, and lack of access to preparation materials. If specialty certifications are incorporated into PPATEPs, some of these barriers may potentially be eliminated, like lack of support and access to preparation materials.

Competencies

The Post-Professional Athletic Training Education Committee has developed six competencies that will be included into PPATEP. These six competencies are modeled from the Institute of Medicines five core competencies for graduate education in health care professions and include patient-centered care, interdisciplinary collaboration, evidence-based practice, quality improvement, use of healthcare informatics, and professionalism (Sauers, 2007). According to Verma, Paterson, and Medves (2006),

competencies are used to define discipline, specialty standards and expectations and to align practitioners, learners, teachers, and patients with evidence-based standards of health care and performance. These new competencies should be available for implementation for the 2012-2013 school year and programs will have one year to include these competencies into the program. These competencies must be included in both the didactic, research, and clinical components of the educational experience. The implementation of the competencies into the program will be evaluated on a yearly basis by the Post-Professional Education Review Committee.

The competencies do not need to be included in all the points of distinctiveness, but should be addressed throughout the whole educational experience. As graduates indicated that these competencies are already related to the current program's points of distinctiveness, the transition of implementation may be smoother in programs who already incorporate these competencies into the curriculum, research, or clinical education. However, implementing these competencies will be challenging. According to Ehnfors and Grobe (Ehnfors & Grobe, 2004), this will require re-education of some faculty members and refinement of curricular content. Global strategies must be used to accomplish the task of incorporating these competencies into post-professional athletic training education. Faculty members and clinical preceptors should be encouraged to embrace the future of post-professional athletic training education and recognize the necessity for improvement.

Graduates indicated that the six new competencies being implemented in post-professional athletic training education by the Post-Professional Education Committee were already evident and related in the program's points of distinctiveness. Of the six

competencies, evidence-base practice was selected the most. Currently, eight out of the sixteen programs have the term "evidence-based practice" in their program's points of distinctiveness, possibly explaining why this competency was selected the most. Health – care informatics was selected the least, and it may be possible that graduates did not fully understand what is included in health-care informatics, or it is simply not included in post-professional athletic training education programs. Programs will have to plan on incorporating all competencies into the curricular and clinical portions of the education plan.

Applying to Jobs and the Program

We found that graduates reported that the program's points of distinctiveness were influential in the jobs they applied to after graduation. If students are graduating from PPATEPs that have PODs in place and are graduating with an advanced knowledge and skill in the areas of the points of distinctiveness, one would believe that graduates should be applying for positions that would use the newly acquired knowledge and skills developed while studying at the PPATEP. In nursing, one of the best ways for a student to choose a nursing master's program is to understand the student's strengths and career goals and then find the program that is best suited to help develop the student's strengths and move the student towards his or her career goals (Dracup, 2005).

Similarly, we also found that graduates felt that the program's points of distinctiveness were influential on their decision to apply to the program. According to Kallio (Kallio, 1995), in general graduate education, students base their decision on which graduate programs to apply to base on six criteria including the characteristic of the academic environment of the institution and its programs. As mentioned before, the

program's points of distinctiveness should guide and focus the program's curricular, clinical and research components. If students are choosing programs based on the characteristics of the program, the points of distinctiveness are crucial components of the program. It has been identified that students focus on the characteristics of the academic environment of the institution and programs as an influential factor when applying to graduate programs (Kallio, 1995), therefore post-professional athletic training education program's points of distinctiveness may also influence students when applying to the program.

Conclusion

The purpose of this study was to examine the state of post-professional athletic training education program graduates (2009-2010), specifically focusing on points of distinctiveness. While there were many components studied, each component was related to the points of distinctiveness. We have concluded that graduates are satisfied with the advancement of knowledge and skill they attained while at their PPATEP and that these points of distinctiveness are emphasized strongly across the four mechanisms of emphasis. The graduates also felt that the program's points of distinctiveness were likely to develop into specialty certifications and that the new competencies for PPATEP are already related to the program's points of distinctiveness. Graduates also felt that the program's points of distinctiveness were influential when applying to the program as well as applying to jobs after graduation.

We acknowledge certain limitations were present in this research. We were unable to obtain accurate e-mail addresses for all participants in the population; therefore the sample size was affected. The responses were not an accurate representation from

each class. There was also an uneven representation from the sixteen programs. The points of distinctiveness used in the survey questions were gathered from the NATA website. There is a possibility that the program's points of distinctiveness were not accurate for the time the graduate attended the program. There were several factors that were not mentioned in the survey questions that could have effected several questions of the survey, including number of faculty members, quality of clinical sites, and research advisors. There was also an error in the survey link when administering the survey, which could have affected the response rate.

Future researchers should begin to examine the other possible factors that can affect the graduate's level of satisfaction with the program's ability to advance their knowledge and skill in the areas of the program's points of distinctiveness. Additionally the perceptions of students, program directors, and clinical preceptors and the inclusion of the six competencies into the curricular and clinical education plans should be examined. Future studies should examine outcome measures in patient care, specifically concerning athletic trainers who graduated from a PPATEP and athletic trainers who have not.

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A.T. Still University

1. Advanced knowledge and clinical practice skills in physical examination and diagnosis, orthopedic rehabilitation, and pediatric athletic training.
2. The provision of patient-centered whole person healthcare services emphasizing evidence-based clinical practice, clinical outcomes assessment, and healthcare informatics.
3. Professionalism as a healthcare provider with knowledge of key healthcare dynamics in the United States and advanced knowledge and skills in athletic training leadership, administration, and management.

San Jose State University

1. Advanced instruction in Evidence Based Clinical Practice in the areas of orthopedic assessment, therapeutic modalities and rehabilitation for diverse athletic training settings.
2. Emphasis on Leadership and Administrative roles related to athletic trainers as a part of a larger health care system.
3. Development of sound Clinical and Educational research skills dedicated to the mission of advancement of the field of athletic training.
4. Exposure to a considerable balance of the Physical and Social Sciences as they pertain to clinical practice in athletic training

University of Hawaii at Manoa

1. Development of scholarly practitioners in the area of exercise physiology as it applies to athletic training clinical practice.
2. Preparation of practitioners with a solid foundation in anatomic principles as it applies to athletic training clinical practice.
3. Preparation for careers in athletic training academia.

Illinois State University

1. Manual therapy in the areas of advanced joint mobilizations, Graston technique, muscle energy techniques, myofascial release, and trigger point therapy.
2. Biomechanical principles and skills as each relates to the prevention, evaluation, and treatment of various orthopedic pathologies

Indiana State University

1. Therapeutic Modalities
2. Education in Athletic Training
3. Electrically Induced Muscle Cramp
4. Hydration of athletes
5. Heat illness

Indiana University

1. Management of soft tissue injuries through manual skills
2. Research in the area of lower extremity problems

University of Kentucky

1. Advanced instruction and experiences in neuromuscular anatomy, pathology, and mechanics with an emphasis on evidence-based practice in the evaluation and rehabilitation of the physically active
2. Advanced instruction and experiences in scientific inquiry with a focus on evidence-based practice

Michigan State University

1. Application of Manual Evaluation and Management Techniques in Athletic Training
2. Professional Preparation of Athletic Training Educators
3. Interdisciplinary Research Experiences

Western Michigan University

1. Coursework within the athletic training major emphasizes human performance and conditioning, with emphasis in aquatic therapy and strength and conditioning
2. Participate in a two year clinical placement that enhances skills and techniques, increase confidence and leadership, promote autonomy and refine communication skills with athletes, coaches, administrators and peers.
3. Have opportunities to volunteer with community sporting events, including several professional affiliations, to enhance clinical experiences and network other allied-health medical professionals

University of North Carolina Chapel Hill

1. Provide a challenging and demanding educational & clinical experience allowing students to enhance their clinical skills in musculoskeletal assessment, manual therapy, and functional progressive rehabilitation.
2. Provide a rigorous research experience oriented toward prevention of musculoskeletal injury and management of sport-related concussion.
3. Provide a teaching experience that allows the students to develop their skills as an educator in both the clinical setting and the classroom setting.

Ohio University

1. Rural health care
2. Evidence based practice
3. Sports injury epidemiology
4. Musculoskeletal injury and neuromuscular function
5. Athletic training education issues
6. Advancement of the athletic training profession

University of Oregon

1. Leadership
2. Active-Learning and Student-Centered Teaching
3. Advanced Clinical Skills

California University of Pennsylvania

1. Performance enhancement
2. Conducting and applying athletic training research
3. Leadership and professional development
4. Cadaver anatomy

Temple University

1. Brain injury prevention
2. Evidence-based medicine
3. Neuropsychological influences on motor control system

Old Dominion University

1. Preparation of the Entry Level Educator
2. Lower Extremity Injury Management Strategies
3. Application of evidence-based concepts within clinical practice

University of Virginia

1. Therapeutic interventions
2. Neuromuscular aspects of injury and exercise
3. Evidence-based practice
4. Clinical research

Clinical Education and Points of Distinctiveness Assessment in Post-Professional Athletic Training Education Programs

Nicole Catalano, ATC
Taylor Arman, ATC

Validity Scoring Rubric

Directions: Please rate each question on a scale of 1 to 3.

1 = question is poor and needs to be removed.
2 = question that will be acceptable once revised. (Please comment)
3 = question is good and should remain in the survey as written.

A comments column is provided for you to make suggestions for changes or to provide other feedback. We have also included 2 questions at the end of the survey that we would like you to answer. Thank you for your time!

Section One: Points of Distinctiveness

Question	**Score (1-3)**	**Comments**
1. Please select NATA Accredited Post-Professional Athletic Training Education Program that you graduated from.		
2. How satisfied were you with the program's over all development of your advanced knowledge and skills in the area of: (List each individual POD)		
3. Points of Distinctiveness are emphasized in post-professional athletic training programs through various mechanisms. Please select the mechanism in which the points of distinctiveness was emphasized the most. (List POD after question)		
4. Please rank the point of distinctiveness according to the amount of emphasis within the program. (List all PODs to rank)		
5. How influential were the program's points of distinctiveness in your decision to apply to the program?		
6. Prior to this survey, how confident were you in your knowledge of your program's points of distinctiveness?		
7. How influential were your program's points of distinctiveness in your job search?		

Section Two: Clinical Experiences

Question	Score (1-3)	Comments
1. How satisfied were you with your program's organization and structure of clinical experiences?		
2. How satisfied were you that your program's clinical education was able to ensure effective learning opportunities?		
3. How satisfied were you that your clinical experiences were able to reflect provisions for progressive development of professional skills and knowledge?		
4. How satisfied were you with the way in which your clinical experiences were evaluated?		
5. How frequently were your experiences evaluated? (Times per year)		
6. How satisfied were you with the mentorship by the person who evaluates you clinically?		
7. What type of evaluation instruments were utilized for clinical evaluation?		
8. How satisfied were you that your clinical experience presented you with opportunities that were compatible with your credentials and expertise?		
9. How satisfied were you with the clinical feedback you were getting?		
10. How satisfied were you that you were provided with opportunities to develop your administrative decision making skills?		
11. How satisfied were you that the number of hours spent in the clinical experience did not interfere with course work instruction?		
12. How satisfied were you that the number of hours spent in the clinical experience did not interfere with completion of assignments?		

13. How satisfied were you that the number of hours spent in the clinical experience did not interfere with the research experience?		
14. Please rate your overall satisfaction with your clinical experience in your NATA Accredited Post-Professional Graduate Athletic Training Education Program.		
15. Are there any components of clinical education that you would suggest adding or changing?		
16. Did your clinical placement align with your future setting choice?		
17. If no, why did your clinical assignment not align with your future setting choice?		
18. In which setting did you work after graduation?		

Part Three: Demographics

Question	**Score (1-3)**	**Comments**
1. On average, how many athletic injuries did you treat/evaluate (does not include taping) in the Athletic Training Clinic on a regular basis?		
2. What percentage of time was spent, at your clinical site, actively performing Athletic Training duties? (Taping, treating, evaluating, etc.)		
3. How many staff members, including yourself, are there at your clinical site?		
4. Did you feel that you had autonomous educational experiences at your clinical site?		
5. Sex		

6. Age		
7. Program Length		
8. Number of credit hours in the graduate program		
9. Number of students in graduating class		
10. What was the average number of hours, per week, completed at your clinical site?		
11. How often did you have direct contact with your clinical supervisor?		
12. At what setting/level was your clinical assignment? (Check all that apply)		

Question 1 for the panel of experts

In your opinion, how long do you think it will take subjects to complete the survey?

Question 2 for the panel of experts

Where should we include the demographic questions, at the beginning or end of the survey?

Additional comments or concerns about the survey instrument:

Section 1-

Section 2-

Section 3-

Subject: Post-Professional Athletic Training Education Survey

Dear *SUBJECT NAME*,

Our names are Taylor Arman and Nicole Catalano, and we are graduate students at Old Dominion University pursuing a Master of Science in Education Degree with an emphasis in Athletic Training. We are conducting research under the supervision of Dr. Bonnie Van Lunen to study NATA-Accredited Post-Professional Athletic Training Education program assessment. You have been sent this email because you have been identified as a graduate of one of the sixteen programs in the country that offer a NATA-Accredited Post-Professional graduate curriculum. Your participation is essential to the success of this research.

Below you will find a link that will take you directly to an on-line survey that seeks to identify demographic information about you (the graduate), and your overall satisfaction of your clinical experience and your program's points of distinctiveness within your respective graduate program. The survey will require 30 minutes of your time, and your answers will remain confidential. By pressing the "Submit" button on the last page of the on-line survey your responses will be automatically sent it.

All participants will be given the opportunity to enter to win one of two 25 dollar Visa Gift Cards. Participants will also be given the opportunity to receive the results of the study once the research has been completed. Your help with this study is greatly appreciated. Any questions regarding the format or results of this study can be directed towards Taylor at tarma001@odu.edu or Nicole at ncata001@odu.edu. **Please complete your survey no later than November 14, 2010.**

To begin, please click on the link below or copy the link and paste it into your internet browser address area.

https://periwinkle.ts.odu.edu/surveys/UM35T9/

Thank you again for your time and participation.

Sincerely,

Taylor Arman, ATC
Graduate Assistant Athletic Trainer
Old Dominion University
(630) 363-1922 (Phone)
tarma001@odu.edu

Nicole Catalano, ATC
Graduate Assistant Athletic Trainer
Old Dominion University
(516) 457-0339 (Phone)
ncata001@odu.edu

Bonnie Van Lunen, PhD, ATC
Director, Post-Professional Athletic Training Education

Director, Human Movement Science
Old Dominion University
Department of Human Movement Science
Student Recreation Center, RM 2003A
Norfolk, VA 23529
bvanlune@odu.edu
757.683.3516 (Phone)
757.683.4270 (Fax)

Subject: CORRECTION: Post-Professional Athletic Training Education Survey

Hello,

Yesterday you received an email from our research team pertaining to a Post-Professional Athletic Training Education Survey. Unfortunately, we have received some feedback that the hyperlink connecting you to the survey is experiencing some technical difficulties. We are in the process of correcting the issue and should have a new and fully functioning survey link to you in the next few days. At this time we would like to ask you to hold off on attempting to complete the survey until a new survey link has been sent to you. Thank you to those individuals who have notified us of the technical error, and we sincerely apologize for any inconvenience this has created.

We truly appreciate your assistance in our research survey and will be sending you a new hyperlink shortly. If you have any questions or concerns, please do not hesitate to ask.

Thank you,

Taylor Arman, ATC
Graduate Assistant Athletic Trainer
Old Dominion University
(630) 363-1922 (Phone)
tarma001@odu.edu

Nicole Catalano, ATC
Graduate Assistant Athletic Trainer
Old Dominion University
(516) 457-0339 (Phone)
ncata001@odu.edu

Bonnie Van Lunen, PhD, ATC
Director, Post-Professional Athletic Training Education
Director, Human Movement Science
Old Dominion University, Department of Human Movement Science
Student Recreation Center, RM 2003A
Norfolk, VA 23529
bvanlune@odu.edu
757.683.3516 (Phone)
757.683.4270 (Fax)

Subject: Post-Professional Athletic Training Education Survey

Dear SUBJECT NAME,

Our names are Taylor Arman and Nicole Catalano, and we are graduate students at Old Dominion University pursuing a Master of Science in Education Degree with an emphasis in Athletic Training. We are conducting research under the supervision of Dr. Bonnie Van Lunen to study NATA-Accredited Post-Professional Athletic Training Education program assessment. You have been sent this email because you have been identified as a graduate of one of the sixteen programs in the country that offer a NATA-Accredited Post-Professional graduate curriculum. The Old Dominion University Institutional Review Board has approved this study. Your participation is essential to the success of this research.

Below you will find a link that will take you directly to an on-line survey that seeks to identify demographic information about you (the graduate), and your overall satisfaction of your clinical experience and your program's points of distinctiveness within your respective graduate program. The survey will require 30 minutes of your time, and your answers will remain confidential. By pressing the "Submit" button on the last page of the on-line survey your responses will be automatically sent it. By pressing the "submit" button, you are agreeing to participate in this research study.

All participants will be given the opportunity to enter to win one of two 25 dollar Visa Gift Cards. Participants will also be given the opportunity to receive the results of the study once the research has been completed. Your help with this study is greatly appreciated. Any questions regarding the format or results of this study can be directed towards Taylor at tarma001@odu.edu or Nicole at ncata001@odu.edu. **Please complete your survey no later than November 28, 2010.**

To begin, please click on the link below or copy the link and paste it into your internet browser address area.

https://periwinkle.ts.odu.edu/surveys/43U8FK/

Thank you again for your time and participation.

Sincerely,

Taylor Arman, ATC
Graduate Assistant Athletic Trainer
Old Dominion University
(630) 363-1922 (Phone)
tarma001@odu.edu

Nicole Catalano, ATC
Graduate Assistant Athletic Trainer
Old Dominion University

(516) 457-0339 (Phone)
ncata001@odu.edu

Bonnie Van Lunen, PhD, ATC
Director, Post-Professional Athletic Training Education
Director, Human Movement Science
Old Dominion University
Department of Human Movement Science
Student Recreation Center, RM 2003A
Norfolk, VA 23529
bvanlune@odu.edu
757.683.3516 (Phone)
757.683.4270 (Fax)

Subject: Post-Professional Athletic Training Education Survey Reminder

Dear *SUBJECT NAME*,

Our names are Taylor Arman and Nicole Catalano, and we are graduate students at Old Dominion University pursuing a Master of Science in Education Degree with an emphasis in Athletic Training. We are conducting research under the supervision of Dr. Bonnie Van Lunen to study both clinical experience and points of distinctiveness satisfaction levels of graduates of NATA-Accredited Post-Professional Graduate Athletic Training Education Programs. You have been sent this email because you have been identified as a graduate of one of sixteen programs in the country that offer a NATA-Accredited Post-Professional graduate curriculum. **If you have already had the opportunity to complete the survey, we thank you for your participation.** The Old Dominion University Institutional Review Board has approved this study. Your participation is essential to the success of this research.

Below you will find a link that will take you directly to an on-line survey that seeks to identify demographic information about you (the graduate), and your overall satisfaction of your clinical experience and your program's points of distinctiveness within your respective graduate program. The survey will require 30 minutes of your time, and your answers will remain confidential. By pressing the "Submit" button on the last page of the on-line survey your responses will be automatically sent it.

All participants will be given the opportunity to enter to win one of two 25 dollar Visa Gift Cards. Participants will also be given to the opportunity to receive the results of the study once the research has been completed. Your help with this study is greatly appreciated. Any questions regarding the format or results of this study can be directed towards Taylor at tarma001@odu.edu or Nicole at ncata001@odu.edu. **Please complete your survey no later than November 28, 2010.**

To begin, please click on the link below or copy the link and paste it into your internet browser address area.

https://periwinkle.ts.odu.edu/surveys/43U8FK/

Thank you again for your time and participation.

Sincerely,

Taylor Arman, ATC
Graduate Assistant Athletic Trainer
Old Dominion University
(630) 363-1922 (Phone)
tarma001@odu.edu

Nicole Catalano, ATC
Graduate Assistant Athletic Trainer
Old Dominion University
(516) 457-0339 (Phone)

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Bonnie Van Lunen, PhD, ATC
Director, Post-Professional Athletic Training Education
Director, Human Movement Science
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Department of Human Movement Science
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757.683.3516 (Phone)
757.683.4270 (Fax)

Points of Distinctiveness and Clinical Experience in NATA Accredited Post Professional Athletic Training Education Programs

POD Introduction

Thank you for your participation in this survey. There are two sections of this survey. The first includes questions about your NATA Post-Professional Athletic Training Education Program's POINTS OF DISTINCTIVENESS and should take approximately 15 minutes to complete.

According to the Standards and Guidelines for Post-Professional Athletic Training Education Programs (2002), each NATA Accredited Post-Professional Athletic Training Program must establish the program's points of distinctiveness. Points of distinctiveness (POD) are interest areas of the program that guide and focus the education of the students in the specific areas established by the program.

Please read all questions and answer them to the best of your ability. Your completion of this survey will be considered your consent to participate in this study. All information will be kept confidential. Upon completion of each survey page, press the NEXT button and the next page of questions will appear. If you need to stop the survey and return to it later, please press the SAVE button. This will allow you to start the survey from where you left off.

Select School

Please select the NATA Accredited Post-Professional Athletic Training Education Program that you graduated from.

{Choose one}

( ) A.T. Still University
( ) San Jose State University
( ) University of Hawaii at Manoa
( ) Illinois State University
( ) Indiana State University
( ) Indiana University
( ) University of Kentucky
( ) Michigan State University
( ) Western Michigan University
( ) University of North Carolina Chapel Hill
( ) Ohio University
( ) University of Oregon
( ) California University of Pennsylvania
( ) Temple University
( ) Old Dominion University
( ) University of Virginia

ODU

Old Dominion University

Listed below are Old Dominion University's NATA Accredited Post-Professional Athletic Training Education Program's points of distinctiveness. The following questions will be about the program's points of distinctiveness.

1. Preparation of the Entry Level Educator

2. Lower Extremity Injury Management Strategies

3. Application of evidence-based concepts within clinical practice

ODU Sat 1

Old Dominion University

How satisfied were you with the program's overall development of your advanced knowledge and skills in the area of:

Preparation for the entry-level educator
{Choose one}
( ) Extremely Satisfied
( ) Very Satisfied
( ) Satisfied
( ) Very Dissatisfied
( ) Extremely Dissatisfied

If you chose any answer besides "Extremely Satisfied," please explain here.
{Enter answer in paragraph form}
[ ]

ODU Sat 2

Old Dominion University

How satisfied were you with the program's overall development of your advanced knowledge and skills in the area of:

Application of evidence-based concepts within clinical practice
{Choose one}

( ) Extremely Satisfied
( ) Very Satisfied
( ) Satisfied
( ) Very Dissatisfied
( ) Extremely Dissatisfied

If you chose any answer besides "Extremely Satisfied," please explain here.
{Enter answer in paragraph form}
[ ]

ODU Sat 3

Old Dominion University

How satisfied were you with the program's overall development of your advanced knowledge and skills in the area of:

Lower extremity injury management strategies
{Choose one}
( ) Extremely Satisfied
( ) Very Satisfied
( ) Satisfied
( ) Very Dissatisfied
( ) Extremely Dissatisfied

If you chose any answer besides "Extremely Satisfied," please explain here.
{Enter answer in paragraph form}
[ ]

ODU Emphasis 1

Old Dominion University

Points of Distinctiveness are emphasized in post-professional athletic training education programs through various mechanisms. Please indicate the amount of emphasis each mechanism had in the advancement of knowledge for the point of distinctiveness. Please use the scale listed to the right. You may use a number more than once, but please only list one number per mechanism.

Preparation of the Entry Level Educator

0= No Emphasis
1= Slight Emphasis
2= Moderate Emphasis
3= Strong Emphasis

Faculty Expertise
{Enter text answer}
[ ]

Academic Courses
{Enter text answer}
[ ]

Research Emphasis
{Enter text answer}
[ ]

Clinical Experience
{Enter text answer}
[ ]

ODU Emphasis 2

Old Dominion University

Points of Distinctiveness are emphasized in post-professional athletic training education programs through various mechanisms. Please indicate the amount of emphasis each mechanism had in the advancement of knowledge for the point of distinctiveness. Please use the scale listed to the right. You may use a number more than once, but please only list one number per mechanism.

Lower Extremity Injury Management Strategies

0= No Emphasis
1= Slight Emphasis
2= Moderate Emphasis
3= Strong Emphasis

Faculty Expertise
{Enter text answer}
[ ]

Academic Courses
{Enter text answer}
[ ]

Research Emphasis
{Enter text answer}
[ ]

Clinical Experience
{Enter text answer}
[ ]

ODU Emphasis 3

Old Dominion University

Points of Distinctiveness are emphasized in post-professional athletic training education programs through various mechanisms. Please indicate the amount of emphasis each mechanism had in the advancement of knowledge for the point of distinctiveness. Please use the scale listed to the right. You may use a number more than once, but please only list one number per mechanism.

Application of Evidence-Based Concepts within Clinical Practice

0= No Emphasis
1= Slight Emphasis
2= Moderate Emphasis
3= Strong Emphasis

Faculty Expertise
{Enter text answer}
[ ]

Academic Courses
{Enter text answer}
[ ]

Research Emphasis
{Enter text answer}
[ ]

Clinical Experience
{Enter text answer}
[ ]

ODU Competencies and SC 1

Old Dominion University

Check all competencies that are related to this POD.

Preparation of the Entry Level Educator
{Choose all that apply}

( ) Patient-Centered Care: Advocate, educate, and collaborate with the patient's best interest as a priority to develop an effective treatment plan
( ) Interdisciplinary collaboration: Interact with other healthcare professionals to optimize the quality of care for the patient
( ) Evidence-Based Practice: Integrate best available research evidence with clinical expertise and consideration of patient values and circumstances to optimize patient outcomes
( ) Quality Improvement: Continually recognize and identify objectives for improvement, and them implement and assess these objectives through changes in patient outcomes
( ) Use of Healthcare Informatics: Use information technology to manage clinical data and access the most recent evidence pertaining to optimum patient care.
( ) Professionalism: Adherence to NATA Code of Ethics and BOC Standards of Practice in all aspects of clinical practice and personal conduct
( ) No competency is related to this POD

A specialty certification is an advanced clinical practice credential that demonstrates the attainment of knowledge and skills that will enhance the quality of patient care, optimize clinical outcomes, and improve patients' health-related quality of life, in specialized areas of athletic training practice.

What is the likelihood that this POD could develop into a specialty certification?
{Choose one}

( ) Extremely Likely
( ) Very Likely
( ) Likely
( ) Very Unlikely
( ) Extremely Unlikely

ODU Competencies and SC 2

Old Dominion University

Check all competencies that are related to this POD.

Lower Extremity Injury Management Strategies
{Choose all that apply}

( ) Patient-Centered Care: Advocate, educate, and collaborate with the patient's best interest as a priority to develop an effective treatment plan
( ) Interdisciplinary collaboration: Interact with other healthcare professionals to optimize the quality of care for the patient
( ) Evidence-Based Practice: Integrate best available research evidence with clinical expertise and consideration of patient values and circumstances to optimize patient outcomes
( ) Quality Improvement: Continually recognize and identify objectives for improvement, and them implement and assess these objectives through changes in patient outcomes
( ) Use of Healthcare Informatics: Use information technology to manage clinical data and access the most recent evidence pertaining to optimum patient care.
( ) Professionalism: Adherence to NATA Code of Ethics and BOC Standards of Practice in all aspects of clinical practice and personal conduct
( ) No competency is related to this POD

A specialty certification is an advanced clinical practice credential that demonstrates the attainment of knowledge and skills that will enhance the quality of patient care, optimize clinical outcomes, and improve patients' health-related quality of life, in specialized areas of athletic training practice.

What is the likelihood that this POD could develop into a specialty certification?
{Choose one}

( ) Extremely Likely
( ) Very Likely
( ) Likely
( ) Very Unlikely
( ) Extremely Unlikely

ODU Competencies and SC 3

Old Dominion University

Check all competencies that are related to this POD.

Application of Evidence-Based Concepts within Clinical Practice
{Choose all that apply}

( ) Patient-Centered Care: Advocate, educate, and collaborate with the patient's best interest as a priority to develop an effective treatment plan
( ) Interdisciplinary collaboration: Interact with other healthcare professionals to optimize the quality of care for the patient
( ) Evidence-Based Practice: Integrate best available research evidence with clinical expertise and consideration of patient values and circumstances to optimize patient outcomes
( ) Quality Improvement: Continually recognize and identify objectives for improvement, and them implement and assess these objectives through changes in patient outcomes
( ) Use of Healthcare Informatics: Use information technology to manage clinical data and access the most recent evidence pertaining to optimum patient care.
( ) Professionalism: Adherence to NATA Code of Ethics and BOC Standards of Practice in all aspects of clinical practice and personal conduct
( ) No competency is related to this POD

A specialty certification is an advanced clinical practice credential that demonstrates the attainment of knowledge and skills that will enhance the quality of patient care, optimize clinical outcomes, and improve patients' health-related quality of life, in specialized areas of athletic training practice.

What is the likelihood that this POD could develop into a specialty certification?
{Choose one}

( ) Extremely Likely
( ) Very Likely
( ) Likely
( ) Very Unlikely
( ) Extremely Unlikely

ODU Rank

Old Dominion University

Please rank the point of distinctiveness according to the amount of emphasis within the program.
{Rank the following from 1 to 3}

[ ] Preparation of the Entry Level Educator
[ ] Lower Extremity Injury Management Strategies
[ ] Application of Evidence-Based Concepts within Clinical Practice

(1= strong emphasis and 3= slight emphasis)

POD and Applying

How influential were the program's points of distinctiveness in your decision to apply to the program?
{Choose one}
( ) Extremely Influential
( ) Very Influential
( ) Influential
( ) Very Non-influential
( ) Extremely Non-influential

POD Knowledge

Prior to this survey, how confident were you in identifying your program's points of distinctiveness?
{Choose one}
( ) Extremely Confident
( ) Very Confident
( ) Confident
( ) Very Unconfident
( ) Extremely Unconfident

POD Job Search

When applying for positions, how influential were your program's points of distinctiveness in your job search?
{Choose one}
( ) Extremely Influential
( ) Very Influential
( ) Influential
( ) Very Non-influential
( ) Extremely Non-influential

Demo 1

On average, how many injured athletes did you treat/evaluate (does not include taping) in the Athletic Training Clinic on a daily basis?
{Enter text answer}
[ ]

What percentage of time was spent, at your clinical site, actively performing Athletic Training duties? (Taping, treating, evaluating, etc.)
{Choose one}
( ) 25% of the time
( ) 50% of the time
( ) 75% of the time
( ) 100% of the time

How many staff members, including yourself, are there at your clinical site?
{Enter text answer}
[ ]

Did you feel that you had autonomous educational experiences at your clinical site?
{Choose one}
( ) All of the time (100%)
( ) Most of the time (75%)
( ) Half of the time (50%)
( ) Some of the time (25%)
( ) None of the time (0%)

Demo 2

Sex:
{Choose one}
( ) Male
( ) Female

Age
{Enter text answer}
[ ]

Graduation Year from Post-Professional Athletic Training Education Program
{Choose one}
( ) 2009
( ) 2010

Program Length
{Choose one}
( ) 1 year
( ) 2 years

Number of credit hours in the graduate program:
{Enter text answer}
[ ]

Number of students in graduating class:
{Enter text answer}
[ ]

Demo 3

What was the average number of hours, per week, completed at your clinical site?
{Enter text answer}
[ ]

How often did you have direct contact with your clinical supervisor?
{Choose one}
( ) Daily
( ) 5 times/week
( ) 3 times/week
( ) Once/week
( ) Less than once/week

At what setting/level was your clinical assignment? (Check all that apply)
{Choose all that apply}
( ) Division I
( ) Division II
( ) Division III
( ) Junior College
( ) High School
( ) Clinic
( ) Military
( ) Industrial
( ) Teaching/laboratory
( ) Other [ ]

Thank You

The survey will be complete once you click the "submit" button. Thank you for your participation.

If you would like to be entered in the drawing for a $25 Visa gift card, please enter your e-mail address below. Again, thank you for participation in this study.

E-Mail Address
{Enter text answer}
[ ]

VITA
Taylor Stephanie Arman

EDUCATION

Old Dominion University — Norfolk, VA
Master of Science in Education — August 2009-August 2011
Thesis: Descriptive Study of the State of Post-Professional Athletic Training Education: Points of Distinctiveness, Specialty Certifications, and Competencies

North Central College — Naperville, IL
Bachelors of Arts — August 2005-June 2009
Major: Athletic Training *Minor*: Psychology

PROFESSIONAL EXPERIENCE

Lake Taylor High School — Norfolk, VA
Athletic Trainer — August 2009-June 2011

North Central College — Naperville, IL
Athletic Training Student — August 2005-June 2009

TEACHING EXPERIENCE

Old Dominion University — Norfolk, VA
Co-Instructor — August 2010-May 2011
ESPR 340: Advanced Prevention and Care of Injuries Related to Physical Activity
HE 224: Advanced First Aid and Emergency Care

North Central College — Naperville, IL
Preceptor — September 2008-Novemebr 2008
HPE 341: Assessment of Upper Extremity, Head and Neck Injuries and Conditions

CERTIFICATIONS

BOC Certification	2009-present
Golden Key Honors Society	2010-present
American Red Cross Emergency Response Instructor	2010-present
Graston Technique Module I Certified	2009-present
Psi Chi National Honors Society	2009-present

PROFESSIONAL PRESENTATION

Arman, TS and Catalano, NA, *Implementation of Ankle Disablement Model*, Old Dominion University Annual Clinical Preceptor Meeting, May 2010

Arman, TS, *The "L" Word*, Illinois Athletic Trainer's Association Annual Symposium, November 2009