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Clinical Instructors' Perceptions of the Importance of Affective Behaviors in Undergraduate Athletic Training Clinical Education

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CLINICAL INSTRUCTORS' PERCEPTIONS OF THE IMPORTANCE

OF AFFECTIVE BEHAVIORS IN UNDERGRADUATE

ATHLETIC TRAINING CLINICAL EDUCATION

A Dissertation

Submitted to the School of Graduate Studies and Research

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Requirements for the Degree

Doctor of Education

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Title: Clinical Instructors' Perceptions of the Importance of Affective Behaviors in
        Undergraduate Athletic Training Clinical Education

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The affective domain represents a set of learning objectives that are difficult to assess and instruct. Affective behaviors consist of different attributes such as interpersonal relationships, professionalism, trust, empathy, and integrity to name a few. This study surveyed athletic training clinical instructors' perception of the importance of using affective behaviors in a clinical setting.

Using data from survey respondents, this study found that clinical instructors have a favorable and positive perception regarding the use of affective behaviors in athletic training clinical education programs. The Chi-Square analysis showed that all groups had a positive perception of the use of affective feedback techniques regardless of gender, experience, National Collegiate Athletic Association (NCAA) affiliation or job setting. Other dependent variables consisting of the use of verbal feedback, peer debriefing session, or summative or formative feedback did not produce any significant differences in perceptions regarding the importance of affective strategies.

To determine the clinical instructors' perception of the importance of affective behaviors in clinical education and the practice of these behaviors, T-Tests and one-way analysis of variances (ANOVA) were performed. The results indicated that all groups had positive

perceptions of the use of affective behaviors regardless of gender, years of experience as certified athletic trainers or clinical instructors, NCAA affiliation or job setting.

The respondents were also asked to rank professional values they felt were most important in the clinical setting. Both cognitive and affective behaviors were equally represented in the top rankings indicating clinical instructors felt both types of behaviors were important in athletic training clinical education.

The results of this study will enable athletic training clinical educators to further develop and use affective behaviors in clinical education sessions.

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Chapter I

INTRODUCTION

"We are what we repeatedly do: Excellence is not an act, but a habit."

Aristotle

As with other medical professions, athletic training is a patient-centered allied health profession. To develop the skills and knowledge necessary to educate competent athletic trainers, athletic training education programs (ATEPs) have attempted to combine an academically challenging curriculum with hands-on clinical experiences. The *Athletic Training Educational Competencies (Competencies)* manual is a cornerstone document that provides educators with instructional guidelines for athletic trainers that reflect current cognitive, psychomotor and affective skills required of an athletic trainer (National Athletic Trainers' Association, 2006). The affective domain of the athletic training competencies represents more elusive learning objectives since these objectives are much harder to assess and more difficult to teach (Hannam, 2000).

Affective behaviors in athletic training represent professional core values that should be infused throughout the athletic training students' (ATS) clinical experience. Traditionally, behaviors that are considered affective in the athletic training profession are not learned through a formal instruction process but rather by a process known as professional socialization (Pitney, Ilsley, & Rintala, 2002). Professional socialization develops affective behaviors in ATSs by increasing the athletic training students' understanding on how maintaining trust in a patient, promoting life-long learning, demonstrating ethical and moral behavior, and being empathetic is important when interacting with patients and athletes (Klossner, 2008). Professional socialization is a way for the ATS to develop and define the roles and responsibilities of the

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athletic training profession through observation and then internally assign these values to become the ATSs' professional identity (Klossner, 2008; Pitney et al., 2002). Instilling professional core values throughout the clinical education experiences can help develop affective behavior of the ATSs and can lead to a more successful professional career. These affective behaviors should be taught throughout the ATSs' academic experience (Hannam, 2000). The ability for the ATS to recognize situations that require empathy, the development of trust, and the importance of interpersonal relationships requires the clinical instructor (CI) to understand the benefits and importance of affective behaviors.

CIs in other allied health professions need various instructional strategies to develop affective behaviors in the clinical setting. For example, promoting moral and ethical decision making behaviors, concentrating on developing interpersonal relationships and using reflection throughout the ATSs' clinical experiences develop affective behaviors. The clinical experience must create an environment that promotes the acquisition of affective behaviors (Franek & Martin, 2008; Martin, Moran, & Harrison, 2009; Pitney & Ehlers, 2004). Medical and allied health research has depicted activities such as reflection, developing appropriate professional relationships, mentorship, discovery, and student centered-learning as important strategies that promote affective skills in the clinical setting (Scifers & Manners, 2005; Phillips & Vinten, 2010).

Research in the medical field, nursing, and physical therapy education identify a learner-centered educational experience and curriculum design as an important factor in developing a professional identity (Weddle & Sellheim, 2009; Lisko & O'Dell, 2010). A learner-centered educational experience consists of using Kolb's learning cycle specifically detailing the use of reflective practice in the clinical experience (Kolb, 1984). This type of learning style uses the

instructor as a facilitator of knowledge instead of having the instructor be the center of the learning experience. Furthermore, this learning style allows the students to "connect theory to practice" and enables the ATSs to "understand the why behind what they are learning" (Weddle & Sellheim, 2009, p. 13).

A lack of pedagogical knowledge on how to create a learner-centered environment is one barrier to adopting these strategies in the clinical environment. A pilot study conducted by Phillips and Vinten (2010), examined the willingness for nurse educators to adopt several innovative instructional strategies related to the affective domain. The role of the nurse educator has shifted from a facilitator of learning instead of just experts in the field of knowledge. The innovative strategies for a learner-centered clinical experience were affective behaviors such as role modeling, encouraging student exploration, and using reflective journals (Phillips & Vinten, 2010).

While other allied health professions have identified the need to have instructional techniques target affective behaviors in clinical education, athletic training has continued to emphasize areas of the curriculum that deal with cognitive and psychomotor skills, whereas affective behaviors have been absent from the clinical curriculum. Athletic training would do well to emulate the curriculum trend that supports a learner-centered educational experience that focuses on innovative instructional strategies to deliver a diverse curriculum that includes affective behaviors for the clinical setting.

Statement of the Problem

On-site clinical experiences should give students the opportunity to learn cognitive, psychomotor, and affective skills. The behaviors that are considered affective in athletic training are: the primacy of the patient, identifying the ability to work with others and the ability to

effect positive outcomes in patients, understanding the need for and consequences of complying with and violating the laws that govern athletic training, abiding by professional standards and being involved in the state, regional and national organizations, ethical and moral decision making, understanding the importance of continuing education and the value of evaluating research and scholarship, cultural competence, and demonstrating honesty, integrity, compassion, and empathy for others. The affective domain competencies in athletic training do not include benchmarks for learning or for assessment unlike the physical therapy profession (American Physical Therapy Association, n.d.).   It is assumed that the behaviors in the affective domain are learned by experiencing on-site professional socialization (Pitney et al., 2002; Klossner, 2008); however there is no evidence that clinical instructors are actively using pedagogical techniques that promote the acquisition of affective behavior skills in clinical settings. There are currently no guidelines on how to assess or develop these common values of the affective strategies in the athletic training profession.

Previously, there has been limited research on the impact of affective behaviors in athletic training settings. Caswell (2003), Thompson (2007), and Lauber and Killian's (2009) research within the affective domain indicate that the athletic training profession has begun to understand the importance of evaluating affective behaviors in athletic training students and clinical instructors. Lauber and Killian (2009) developed an assessment tool that identified 15 different interpersonal and professional behaviors clinical instructors should demonstrate in the clinical settings to the ATSs. Honestly, legal and ethical behaviors when dealing with athletes/patients were viewed as critically important behaviors when an ATS is observing the clinical instructor (Lauber & Killian, 2009). It is difficult for clinical instructors to target

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interpersonal skills and it is even more difficult to modify affective behaviors skills in the clinical setting.

Studies by Laurent and Weidner (2002) and Platt Meyer (2002), have found that there is a transfer of information of professional beliefs from the clinical instructor to the student but there are no studies that examine the CIs' perceptions of the importance of affective behaviors in clinical settings. In athletic training education, ATSs are encouraged to participate in professional development experiences such as volunteering for community service or being involved in athletic training student clubs that have educational workshops or engage in fund raising events for the community (Gardiner & Mensch, 2004). These experiential learning activities are valuable for the ATS to develop professional identities but they do not provide opportunities for CIs to assess affective behaviors in a clinical setting.

Extensive investigations in medical student education, physical therapy education, and nursing education indicate that educators have identified specific affective behaviors that are important for clinical instructors and student to exhibit in the clinical setting. The affective behaviors described in the medical research include: identifying appropriate interpersonal relationships with a diverse group of individuals such as coaches, administrators, physicians, peers, parents, and athletes (Scifers & Manners, 2005), honesty, altruism, professionalism (Jha, Bekker, Duffy, & Roberts, 2007), compassion, caring, accountability, integrity, (American Physical Therapy Association, n.d.), ethical decision making, empathy, and pursuit of excellence (Lesser, Lucey, Egener, Braddock, Linas, & Levinson, 2010). In athletic training education, the *Competencies* refer to affective behaviors in the Foundational Behaviors of Professional Practice which identify core values of the athletic training profession (National Athletic Trainers' Association, 2006).

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In athletic training clinical education, CIs directly and indirectly influence students through their own professional interactions and relationships. Students also tend to mirror the attitudes, values, and perceptions of the CI (Ernstzen, Bitzer, & Grimmer-Somers, 2009; Lesser et al., 2010). It is critical for CIs to develop and improve their instructional techniques and communication skills because the professionalism and affective behaviors they exhibit in the clinic are observable and emulated by the students.

As the expectations of the athletic training students have continued to evolve and athletic training education has undergone revision, CIs play a crucial role in the application of knowledge. The clinical skills and perceived interpersonal relationship skills exhibited by clinical instructors are an integral part of the professional development, education, and maturation of the athletic training students.

Purpose

The purpose of this study was to survey clinical instructors regarding their perception of the importance of affective behaviors in athletic training students in the clinical setting. Surveying perceptions of the value of developing affective behavior is important simply because the athletic training education competencies focus heavily on skills related to the cognitive and psychomotor domains. Gaining an appreciation of clinical instructors' perception of the importance of affective behavior can help the researcher understand how much emphasis is placed on the affective domain in the ATSs' clinical education.

Athletic training students need to see CIs using affective behaviors and techniques in a clinical setting because these daily interactions contribute to the professional skills necessary to become a successful athletic trainer. Affective behavioral skills may be as simple as ensuring the ATS interacts in a professional manner with other peers to something as complex as using

reflection throughout their clinical rotation to modify and revise their behavior based on feedback and observations. Reflecting, being self reliant in situations, and demonstrating moral and ethical behavior in the clinical environment indicate the highest level of affective behavior (Krathwohl, Bloom, & Masia, 1964). Athletic training students need to have the opportunity to learn and practice these affective behaviors in the clinical setting to develop core values of the athletic training profession.

Research Questions

1. What types of feedback do clinical instructors use most often in the clinical experience to develop and evaluate affective behaviors in the clinical setting? Do years of experience as an athletic trainer, gender, years as a clinical instructor, NCAA affiliation and job setting matter?

2. Do clinical instructors feel affective behaviors are an important aspect in the clinical education of an athletic training student?

3. How important do clinical instructors perceive the practice of affective behaviors by athletic training students in the clinical setting?

Definition of Terms

Affective Behavior. Affective learning demonstrated by behaviors indicating attitudes of awareness, interest, attention, concern, and responsibility, ability to listen and respond in interactions with others, and ability to demonstrate those attitudinal characteristics or values which are appropriate to the test situation and the field of study (Krathwohol, Bloom, & Masia, 1964).

Clinical Instructor. A Clinical Instructor (CI) is an BOC Certified Athletic Trainer or other qualified health care professional with a minimum of one year of work experience in his/her respective academic or clinical area. Clinical instructors teach, evaluate, and supervise

athletic training students in the clinical experiences. A clinical instructor is not charged with the final formal evaluation of athletic training students' integration of clinical proficiencies.

Significance of Study

This study was meant to survey the perceptions of feedback techniques that help develop affective behaviors, the development of affective behaviors in the clinical setting, and the opportunities to practice these behaviors in athletic training students. This study is important for a two reasons. First, there is limited research on the affective domain related to athletic training in the clinical setting. Second, ATSs learn professional and affective behavioral skills directly and indirectly from their clinical instructors. It is necessary to find out if CIs perceive affective skills as an important part of the educational process in the clinical setting. The *Foundational Behaviors of Professional Practice* (*Behaviors*) seeks to address the need to include the affective domain in educating future athletic trainers, however observable behaviors that CIs should be able to identify while the ATS is in their clinical rotation are not identified.

Other health professions such as physical therapy and medicine have explored the role of affective behavior development in clinical education. Using techniques such as scenarios, real-life examples, simulations, and peer development are all useful tools to develop affective behaviors in students (Lisko & O'Dell, 2010). Providing appropriate feedback to the students is a valuable way for CIs to develop and assess affective behaviors. Providing written feedback in conjunction with formative feedback can reinforce affective behaviors in ATSs (Elliot, May, Schaff, Nyquist, Trial, Reily, & Lattore, 2009; Emmerson, Tillard, Ormond, Ramsey, & Moore, 2011).

The American Physical Therapy Association (APTA) has developed a list of core values that describe professional attributes the physical therapist should display during their clinical

education. These core values are then associated with observable behaviors that give an indication that the student is exhibiting the correct value during their clinical experience (American Physical Therapy Assocation, n.d.). Professionalism within the medical community is becoming more defined and a strong emphasis has been placed on building connections between the values learned in the classroom and the affective behaviors observed in the clinical setting. The Physician Charter on Medical Professionalism reiterates the emphasis of the fundamental principles of professional practice as well as a set of professional responsibilities that each medical professional should maintain in their daily practice (ABIM, 2002). Medical schools have already begun incorporating affective behavior skills in the clinical experience as a competency that requires deliberate practice that should be nourished over the span of a physician's career (Lynch, Surdyk, & Eiser, 2004). Athletic training education would do well to emulate the advances both physical therapy and medical educators have taken to include affective behavioral skills as part of their clinical curricula.

A second reason of importance for this study was that ATSs learn the professional and affective behavior skills from the interactions with their CIs that are fundamental to the profession of athletic training (Lauber & Killian, 2009). If the CIs do not consider affective behavior as an important attribute to have in their own practice of clinical skills, they will not pass this information to their students. In other allied health professions, the classroom instructor and CI contribute to the cognitive development, clinical instruction and professional development of athletic training students. CIs should have a well developed sense of leadership style, interpersonal skills, and communication skills because the behaviors they exhibit in the clinic are observable to the students.

Study Limitations

This study has some limitations to consider before it should be assumed that the perceived attitudes of affective behaviors should be generalized to the entire population. First, the instrument used in this study exclusively relied on self-assessment and self-reporting to characterize responses. Second, although every effort to make this survey available to the entire clinical instructor population throughout the entire country was made, it is possible that not every clinical instructor was made aware of the study. There is currently no database that identifies clinical instructors. Due to the possibility of employment changes and graduate student graduation/hires some individuals may have been in transition during the time of subject recruitment.

Third, clinical instructors who do not work directly at a university or college may not have been included in the study because the subject recruitment relied heavily on program directors to either supply the researcher with the necessary directory information or the program director was asked to forward the survey link to all potential subjects. It is possible that the program directors did not forward the information to all the clinical instructors associated with the athletic training education program (ATEP).

Finally, this study concentrated only on clinical instructors who were certified athletic trainers. Other clinical instructors associated with the ATEP could include physical therapists, physicians, and nurses just to name a few, however these clinical instructors were excluded from the study. Their perceptions and attitudes were not identified through this research.

Summary

This study examined the role clinical instructors played in the development of affective behaviors in athletic training students. It was essential to gain an understanding of the perceived

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importance of affective behaviors and core values by clinical instructors so educators can understand how these values are being taught to the athletic training students in the clinical setting. Researchers in the medical field and other allied health professions such as nursing and physical therapy have clearly defined affective behavior learning objectives and core values essential to the profession that have been infused into the curriculum and the clinical experience. Developing affective behaviors and core values that are clearly stated and evaluated during the clinical experience for athletic training students have the potential to affect the student far beyond their academic learning experience.

Chapter II

REVIEW OF RELEVANT LITERATURE

This section reviews the literature that is relevant to the history of athletic training

education, current athletic training undergraduate education, instruction and learning styles in

athletic training, affective and professional behaviors for athletic trainers, and affective

behavioral skills and instruction in medical and other allied health professions. This literature

review examined two psychological theoretical frameworks; Howard Gardner's theories of

Multiple Intelligence and Daniel Goleman's Theory of Emotional and Social Intelligences as a

basis for this study. The leadership theoretical foundation is provided by Rosabeth Moss-

Kanter's *Confidence*.

Teaching Athletic Training

History of Athletic Training Education

Athletic training education dates back to the mid-to-late 1950s (Delforge & Behnke,

1999). Originally, athletic training education was a component of physical education but has

since changed to be a standalone degree in the allied health care profession. According to

Starkey (1997) "in less than 50 years, we have progressed from the equipment room to the

athletic training room, and we are now entering clinics, hospitals, and industrial settings" (p.

113). After the inception of the National Athletic Trainers' Association (NATA) in 1950, a

committee was formed in 1955 entitled the Committee on Gaining Recognition (CGR) that led to

the beginning of the first formalized athletic training education recommendations. This

committee was the beginning of the NATA Professional Education Committee (PEC) that

oversaw education in athletic training for nearly 30 years (Delforge & Behnke, 1999). After

1955, athletic training education began a series of important events that transformed the athletic training education known today.

The 1960s marked the emergence of the athletic training education program (ATEP). During this time, athletic training was not as marketable to the public as it is today so the founding members of the CRG recommended that they become versatile in their employment options. Students who wanted to pursue athletic training careers were encouraged to enroll in degrees that emphasized athletic training but included physical education-teacher prep tracks or continue to physical therapy school as a way to become more specialized in their expertise (Delforge & Behnke, 1999).

The first athletic training certification exam, administered in 1970, is another hallmark of the athletic training education that helped to legitimize the athletic training profession. The inception of the certification exam created national standards that were uniform to all athletic trainers. Incorporating national standards for the profession showed the potential for growth and development both educationally and professionally (Delforge, 1982). The 1970s also marked the period of greatest growth for the ATEPs and programs grew from 4 to 62 by 1982 (Delforge & Behnke, 1999). The NATA began approving undergraduate curriculum programs throughout the United States. With the emergence of the athletic training curriculum and through the diligent work of the PEC it was obvious there was an increasing need for certified athletic trainers as a member of allied health care professionals. Universities also began to realize the potential for athletic training majors and the PEC turned attention to developing written components of an athletic training major. The standards developed by the committee transformed the original curriculums to change from an emphasis in athletic training to an academic major (Delforge, 1982).

Current Athletic Training Education

Although there have been many different educational reforms in the past, none encompassed the vast reforms of the past 10 years (Craig, 2003). Prior to January, 2004, there were two different avenues students could take for athletic training education; an internship route or a curriculum program. The internship route provided students the opportunity to become eligible to sit for the national athletic training exam even if the university or college they attended did not have a specific degree program. This route placed emphasis on learning complementary material in the classroom and then honing athletic training clinical skills with hands on experiences working with certified athletic trainers. Students were required to complete a minimum of 1500 hours in the clinic in order to be eligible to sit for the certification exam. After January, 2004, students no longer had the option to be eligible to sit for the certification exam through the internship process. The only way to be eligible for the exam was to enroll in a college or university that offered athletic training as a degree program.

The main goal of the educational reformation was to help the profession of athletic training acquire respect in the eyes of other allied health professions and to streamline the educational process. According to Craig (2003) the following goals are some of reasons for the reform:

1. betterment of the profession;

2. betterment of the professional image;

3. competition in the health care arena;

4. adaptation to the expectations of the health care community;

5. adaptations to the proliferation of new work environments;

6. strengthening of the quality, reputation, and education requirements of the certified athletic trainer credential;

7. building a healthy, reasonable and financially tolerable clinical learning environment for students;

8. integrating a clinical-education model based on measurable, standardized, and referenced learning objectives;

9. integrating competencies in education;

10. integrating clinical-education objectives;

11. improving clinical instruction;

12. taking the best elements of the internship and curriculum routes to form a single, better educational model;

13. resolving disparities in the preparedness of entry-level athletic trainers;

14. standardizing the route to certification. (p. 353)

As part of the educational reform process, the accrediting body that is responsible for athletic training education has also changed. In 1991, the Joint Review Committee on Educational Programs in Athletic Training (JRC-AT) oversaw athletic training education through the Commission on Accreditation of Allied Health Education Programs (CAAHEP). In 2006, the JRC-AT decided to become independent from CAAHEP and changed its name to the Commission on Accreditation of Athletic Training Education (CAATE) and was responsible for all athletic training program accreditation (Board of Certification, 2009). As with all accrediting bodies, the purpose of the accreditation is to standardize education practice and become a benchmark for all education programs.

Instructional Strategies

The educational reforms happening to athletic training education brought to light many different avenues for educational practices by instructors. This section of the literature review examined the role of the classroom and clinical instructor in athletic training. Furthermore, this section identified different strategies that allowed the instructor to foster a positive and constructive educational learning environment.

Classroom education. Athletic trainers are in a unique role to be involved in students' education in both a classroom and clinical setting. As the accreditation standards change, so too have the demands placed on the faculty teaching in ATEPs. Many schools have since created an educational and clinical coordinator position in addition to program directors to help ease the transition from classroom to clinical education. Although a clinical coordinator position is not required by the CAATE standards, it is strongly recommended to ensure the student is getting an adequate clinical experience (Commission on Accreditation of Athletic Training Education, 2008).

According to Mensch and Ennis (2002), previous research has been limited to describing relationships between educational variables and the student success rates as defined by the pass/fail rates on the BOC exam. It is very important to gain a more meaningful insight on what types of strategies instructors can employ in the classroom setting that will carry over to quality education experiences in the clinical setting required for all ATEPs. By examining different strategies and pedagogies, instructors can help their students gain a deeper learning in the concepts of athletic training. The study by Mensch and Ennis (2002) found three different categories of learning that were most helpful to the students. By using scenarios, authentic experiences, and a positive educational environment, instructors can create an atmosphere in the

classroom that is beneficial as well as educationally sound to help students apply and understand the concepts of athletic training. These three categories also build the confidence of the student which is essential in student learning.

The use of scenarios in classroom education has a positive influence on the students' willingness to participate actively in class in addition to an increased motivation to learn. This application also provides a great opportunity to bridge the gap between classroom instruction and clinical instruction. The use of scenarios allows the students to practice the skills they learn through theory before they use the skills in the clinical setting. This strategy also increases the students' confidence level and preparedness for practical application in the clinical setting. Using scenarios can help build onto the authentic experiences they will encounter in the clinical education. An article written by Franek and Martin (2008) identified authentic experiences and scenarios as a way to facilitate learning and problem solving.

Creating a positive environment for learning has emerged in the literature as essential for a successful way to foster student confidence, increasing motivation to learn, persistence, and enhances students' learning (Mensch & Ennis, 2002). The instructor-student relationship is an essential part of this category especially for the confidence level experienced by the student. Even though the internship route was eliminated, a major strength of that educational process included the clinical aspect and requirements. The student was required to obtain at least 1500 hours of clinical observation and practice. One of the greatest potential benefits from this requirement was the student-clinical instructor mentorship that occurred as a result (Starkey, 1997).

The instructor-student relationship can also be compared to mentoring. Mentoring is a widely accepted method of growth and development. A study by Pitney and Ehlers (2004), used

a grounded theory qualitative approach to describe the mentoring process in athletic training. The study revealed that there was an education dimension to mentoring that facilitated curiosity and inquisitiveness in students when they had a mentor. The mentor would help them refine and improve their analytical and problem solving skills. This was able to occur because the student was able to feel their mentor was trustworthy which led to better personal interactions between mentor and student. The mentoring takes into account the protégé's learning style and potential (Pitney & Ehlers, 2004).

Other identifying areas that enhance the student educational experience are peer relationships. Peer assisted learning (PAL) can be identified as peer tutoring, peer modeling, peer education, peer counseling, peer monitoring, and peer assessment (Henning, Weidner, & Jones, 2006). Peers can be identified as either near peers or co-peers. Near peers are when a student is at a higher academic level than another student who is getting tutored, mentored, etc. Co-peers are identified as students of the same academic level (i.e., seniors helping other seniors) (Henning et al., 2006). PAL also allows the student to be aware of their own skill level when they evaluate their peers. According to Henning and Marty (2008), peer assessment incorporates learning over time into the athletic training curriculum which allows for "practice and internalization, and subsequent reevaluation in a real or simulated patient setting" (p. 30). Peer mentoring becomes another tool for the athletic training instructor to use that will support and enable the student to maximize potential learning. Furthermore, PAL helps develop confidence, critical thinking skills, and decision making through reflection and feedback. The use of this technique can help the student learn how to be a self-directed thinker which is the hallmark of critical thinking skills and metacognition in students (Franek & Martin, 2008).

Other classroom strategies for developing analytical, speaking, and critical thinking skills can be the use of debates in the classroom, fostering learning communities, engaging in research, and using podcasts to deliver information to students. The use of debates not only highlights students' knowledge and speaking ability, but it can highlight aspects of athletic training not formally received daily in the classroom. For example, debates can lead to greater exploration in matters such as health care, drug testing, economic, or administrative controversial topics that may not be covered during a regular classroom activity (Martin, Moran, & Harrison, 2009). Furthermore, debates help enhance ethical and moral decision making of the athletic training student and provide a great time for reflection and introspection.

Learning communities are another way to develop a balanced educational climate that creates a learning environment. Learning communities are a group of people who promote positive and engaging activities in the classroom and in social situations (Zhao & Kuh, 2004). Learning communities have emerged as a result of creating a learner-centered environment as opposed to the instructor being the central part of the learning paradigm. Further, learning communities help to foster reflective practice in students that helps the student associate ideas together and creates a deeper learning to occur (Peer & Huston, 2009). Not only does a learning community help to facilitate cognitive function for processing classroom materials, but learning communities help students engage in socialization of the profession, develop better clinical skills, and evaluate ethical and diversity issues. All of the instructional methods encourage and develop affective behavioral skills in athletic training students.

Podcasting in athletic training education is a new way to add supplemental instruction and provide information to the students (Bennett, 2006). This does not replace teaching in the classroom but enhances learning through an electronic medium to help students gain further

understanding of a concept. Furthermore, Bennett (2006) explains that podcasts can also be designed for students to examine before class which enables the learner to provide better information for classroom discussion. This then creates an opportunity for students to develop better cognitive skills and display a better command of the unit being studied.

Clinical education. Clinical education has always been especially important in the health care professional's preparation in conjunction with curriculum work. Laurent and Weidner (2002), defined clinical education as "the hands-on experience involving clinicians, students, and patients in a real-life environment" (p. S-248). The NATA Educational Council has acknowledged that clinical education is an important aspect in any curriculum program and developed the Clinical Instructor Educator (CIE) and Approved Clinical Instructor (ACI or CI) credentials for individuals that instruct undergraduate athletic training students (Laurent & Weidner, 2002). According to the CAATE (2006), the CIE is Board of Certification (BOC) credentialed for a minimum of three years and is authorized to oversee the CI training. The CI is to be a certified athletic trainer (ATC) or a credentialed health care professional for a minimum of one year. The CI's responsibility is to provide instruction and evaluation of the *Athletic Training Educational Competencies* in the athletic training students (ATSs) clinical education experience (Commission on Accreditation of Athletic Training Education, 2006).

It is essential for the CIs to be aware of ATSs' needs and be prepared to take on the responsibility of professional development in the clinical instruction. Athletic training students perceive that approximately 53% of their development is from clinical education (Laurent & Weidner, 2002), so the selection and training of CIs becomes very important. Weidner and Laurent's (2001) work helped to determine specific clinical education standards to guide CIs to be more effective clinical instructors. The standards include the learning environment, program

planning, learning experiences, ethical standards, administrative support, effective

communication, staff number, setting coordinator for the clinical education, clinical instructor

selection, principles of teaching and learning, professional associations, and adequate space. All

these items are needed to ensure a quality clinical experience for the athletic training student.

Further research (Weidner, & Henning, 2005) has continued to support the initial research of the

importance of having the standards in all clinical settings. These standards are continually used

in the selection, training, and evaluating of CIs in a multiple range of athletic training settings for

students.

      Clinical instruction. Clinical instructors are being evaluated and emulated by the

students they educate on a daily basis. The CI is both directly and indirectly observed in their

professional skills by the students. According to Platt Meyer (2002), "clinical instructors are

teaching students leadership skills by their own actions and reactions to situations" (p. 34).

Since CIs are, by default, also in a leadership role, it becomes apparent that effective CIs should

exhibit leadership characteristics consistent with those of effective leaders. When examined,

three leadership variables are statistically significant in predicting traits of an effective CI;

professional attitudes, professional actions, and communication skills (Platt Meyer, 2002).

These affective behavioral skills are as important in the clinical setting as traditional cognitive

skills. Weidner and Henning (2004) further add that in addition to those characteristics listed by

Platt Meyer (2002), CIs need to demonstrate knowledge in their field, be aware of the students'

current level of knowledge, general teaching pedagogies and strategies, and encourage critical

thinking skills with a problem-based approach. Real-time evaluations, simulations, and

standardized patients were used by CIs to evaluate clinical skills (Walker, Weidner, &

Armstrong, 2008). These methods allow the CI to provide the students with the opportunity to practice their skills to become proficient and skilled in the clinical setting.

There are a few problems associated with evaluating clinical learning. First, real-time evaluations are done if available but a student only gets the chance to practice on a real patient if there is a CI willing to allow them to do the evaluation, if an injury occurs, and if the student is available at the time of injury. Simulations provide a great option for the student to practice and should be considered an approved method for evaluation. Standardized patients are used commonly in the medical field; however, the use in athletic training has been limited or non-existent before described by Walker et al. (2008).

Some barriers to adequate clinical instruction in athletic training education continue to be the lack of resources given to the department by the university. Often, CIs have dual roles in the department that include teaching and covering athletic events that creates a role strain for the athletic trainer. Walker et al. (2008) identified role strain as a defining barrier to providing students with real-time evaluation. Some CIs are allotted increased compensation through overload or are given release time to be CIs while other schools do not allow this to occur (Mensch, 2006). In many ATEPs it is one of the jobs of the ATCs to become a CI and provide instruction and leadership to students. Often, an ATC has administrative, patient duties, and sometimes classroom duties in addition to being a CI for multiple students (Henning & Weidner, 2008; Mensch, 2006). The athletic trainers who typically report role strain tend to be dual-appointed. According to Henning and Weidner (2008), the athletic trainers appointed at Division II institutions experienced a high degree of role strain. It is important for the CIs to practice techniques to reduce role strain to ensure the student is getting a quality clinical experience.

Time constraints can also be considered a problem area that CIs experience that hinders clinical learning and experiences. Clinical instructors should take the time during evaluations to explain techniques and procedures to the ATS. This ensures a deeper meaning is associated with the learning experience so the student can apply what they have learned. Just being in the clinical setting does not mean the student is absorbing the information needed to pass the entry-level exam. It is more important that the CI integrates the psychomotor and cognitive skills needed to provide the student with a quality clinical experience (Sammarone, Turocy, Comfort, Perrin, & Gieck, 2000).

Using appropriate and constructive feedback is a way for clinical instructors to assess and evaluate affective behaviors in athletic training students in the clinical setting. A qualitative study by Mensch and Ennis (2002) revealed students believed they had more meaningful experiences with the use of real-life examples both in the classroom and in their clinical education experience. Instructors also consider the use of real-life examples as a necessary and essential tool in the education of ATSs. Using well thought out real-life examples will aid the students in making important decisions for various professional situations they will encounter after their schooling is finished (Vallevand, Paskevich, & Sutter, 2005). Similar to real-life examples, simulations provide more than advanced critical thinking skills; they allow students to vocalize ethical concerns, promote self evaluation, and elicit reflection and feedback for the students which all contribute to learning professional values and affective behaviors in the clinical setting (Lisko & O'Dell, 2010).

Using real-life examples in the clinical setting can also be described as a "teachable moment" in clinical education. In research conducted by Rich (2009), three themed teachable moments in athletic training emerged from the data which included the use of authentic, hands-

on experiences. Of the three teachable moments described in the study, only 18% of the

teachable moments were described as the authentic experience (Rich, 2009). The use of real-life

experiences was important to both the clinical instructors and athletic training students.

The use of written and verbal feedback is also an important tool for clinical instructors to

identify skills and techniques that the ATSs could improve upon and also to provide positive

feedback. Verbal feedback is often the easiest and less time consuming way to provide

information to ATSs regarding their progress in the clinical setting. Written feedback is often

more time consuming for clinical instructors to utilize in their busy lives but is a valuable tool to

use to provide information to ATSs regarding their skills in the clinical setting. According to

Emmerson, Tillard, Ormond, Ramsay, and Moore (2011) using written feedback provides a

benefit to the student to reflect on their progress, demonstrate progress in skills and to ensure that

advice has been followed. The research performed by Emmerson et al. (2011), indicated that

clinical educators would benefit from using written feedback for their students because it allows

them to monitor the "level and type of questions that are being presented to their students" (p.

30).

Providing both verbal and written feedback in the clinical setting has been identified as

being important for medical education. Salerno, Jackson and O'Malley (2003) discovered that

those instructors who went to faculty development seminars increased their feedback responses

with more formative feedback and a decrease in summative feedback. Elliot et al. (2009)

describe medical students as needing formative "coaching" and summative evaluation. A

formative discussion can help consistently reinforce the professional values of the student. The

effects of using both verbal and written feedback techniques could be an important tool in

shaping the professionalism in the ATS.

Salerno et al., (2003), also found that feedback that was more specific and linked to specific events as the most helpful. Verbal feedback tends to be less specific and is not available for students to examine after the instructor delivers the feedback. Affective behavior feedback was reported low as student attitudes were mainly not discussed after the training seminar and all feedback tended to be centered on knowledge or skill (Salerno et al., 2003).

Barum and Graham (2008) identified different techniques for providing feedback to motivate deep thinking and encourage students to process how to think rather than how to memorize information. Different feedback techniques have been described as corrective, directive, and reflective and should be used according to the ATSs' level of knowledge. Krathwohl et al. (1964) theorize that in some instances it is important to alternate the achievement in skills in the cognitive domain and then use that achievement as a way to include the affective domain into the students' education. By using different formative feedback techniques as described in Barum and Graham (2008) the clinical instructor cannot only make sure cognitive competencies are met in the ATS but also can provide feedback that allows the student to self-reflect and incorporate affective objectives in the clinical education.

The ATEP strives for a didactic learning experience where classroom education and clinical education meet to provide an excellent learning experience where students are able to apply the theory learned in class to the hands-on skills in the clinical setting. However, if there is not appropriate feedback given to the student by the CI then we do not know if the student is actively learning their professional responsibilities or skills. Laurent (2010) said "Teach a student about Athletic Training and you prepare her for the next test. Teach her how to learn from her experiences and you have taught her how to be a lifelong learner" (p. 3). Laurent's developed a resource for athletic training CIs to guide them in ways to provide meaningful

discussion with their students regarding their performance, to provide rubrics as a way to assess affective behaviors in ATSs through reflection techniques (Laurent, 2010). Tools such as rubrics allow the CI to understand questions and discussions that will allow a higher level of learning that will assign ATSs with professional values and identities that will stay with them after graduation and into their workplace.

  Learning styles of athletic training and allied health students. If communication is a variable that helps predict leader effectiveness of the CI, it is also important for the CI to consider the learning styles of the student; which will promote a more effective environment that facilitates learning. A study by Stradley, Buckley, Kaminski, Horodyski, Fleming, and Janelle (2002), described four different types of learning styles; the accommodator, diverger, converger, and assimilator. Each type of learning styles has strengths and weaknesses that work for each individual. An accommodator typically relies on personal feedback and feelings. The preferred learning method for this type of individual is through kinesthetic awareness. Typically, the student should be encouraged to observe different techniques and then follow up in a laboratory setting to practice. A student is classified as a diverger if they perform well in collaboration sessions and are imaginative, sensitive, perceptive, and easily recognize problems. While it is important for the athletic trainer to have all these qualities, it is also easy for the diverger to be indecisive at times. Individuals who are converger learners tend to think in the abstract and are very good problem solvers. However, convergers are less likely to deal directly with people and should be encouraged to practice their communication skills. Finally, the assimilator is a learner similar to the converger, however, the assimilator relies on abstract concepts and reflective practice. They are more likely to focus on investigating different aspects of athletic training and formulate a solution based on their investigations (Stradley, et al., 2002).

Although the study (Stradley, et al., 2002) did not find a predominant learning style in any of the athletic trainers, it showed that there is a strong learning diversity among entry-level athletic training students (ATS). In contrast, Ristori, Eberman, Tripp, and Kaminski (2011), evaluated learning styles in ATSs and found that diverging learning style was the most prevalent in their study sample. In order to meet the needs of all of the ATS, the CI should provide diversity in the clinical instruction to ensure the experience stimulates and enhances student learning. Each student learns differently and the CI needs to adapt to the students' level of knowledge and learning style.

A learner-centered approach has been described in medical, nursing, and physical therapy clinical educational practices as a self-directed, self-assessment, reflective instructional technique that enables clinical instructors to be facilitators of learning and allows the students to be ready for professional duties after graduation. In a model of self-directed learning, Lacasse, Lee, Ghavam-Rassoul, and Batty (2009) describe a four dimensional approach to clinical instruction where the instructions are attentive to the feelings, expectations, ideas, and evaluation of the impact of learning of the student. According to the authors, using self-directed learning helps increase the amount of motivation and allows the students to identify their own needs regarding their educational experience (Lacasse et al., 2009). In nursing, clinical educators are encouraged to adopt the sociocultural theory which is a student-centered approach where the clinical instructor's role is to motivate and support the students toward their potential (Phillips & Vinten, 2010). Multiple strategies for student-centered learning emerged as a result of this research that include reflective journaling, using case-studies and simulations to encourage critical thinking skills, and using games and communication vignettes as a way to guide students through the learning process (Phillips & Vinten, 2010). In athletic training clinical education,

Heinerichs and Curtis (2006) used a 3-2-1 technique to develop reflection practices in ATSs. The purpose of this technique is to facilitate reflective practices for the student to obtain a meaningful learning of their abilities and interactions between patients.

Kolb's theory of experiential learning is another model that has been adopted by nursing and physical therapy curriculums as a way to prepare students to be efficient and effective practitioners after graduation (Kolb, 1984). According to Weddle and Sellheim (2009) educators in a physical therapy curriculum are experts in their knowledge base but do not necessarily challenge the student to develop critical thinking skills throughout their educational experience. These authors proposed an integrative curriculum approach to instruction that involved using Kolb's learning paradigm that contained concrete experiences, reflective observation, abstract conceptualization, and active experimentation (Weddle & Sellheim, 2009). These experiences aid all the students to critically evaluate information then embed this knowledge into practice and develop morals and professional values that they take with them throughout their career. This type of instructional paradigm allows the students to develop their own professional identity and attributes to affective skills that are not formally taught in any classroom but is nurtured in the clinical experience.

Nursing curriculums have also integrated Kolb's learning paradigm into their curriculums because of both the cognitive and affective this paradigm has on learning. Early research in the nursing field (Spence Laschinger, 1990) revealed the potential for the importance of incorporating the experiential learning theory into nursing curriculums to emphasize affective learning environments in nursing clinical education. Newer research in integrating Kolb's experiential learning theory into nursing education has been described by Lisko and O'Dell (2010) and Waldner and Olson (2007) as a necessary part of the curriculum to attain advanced

critical thinking skills in nursing students rather than activities that produce technical mastery. Both studies used simulation education that allows students to practice on fellow students which allows them to gain confidence and reduce the amount of anxiety felt by the students initially (Waldner & Olson, 2007). Other benefits to using simulations in an integrated curriculum have shown that there are more benefits than the students just exhibiting advanced critical thinking; it allowed students to vocalize ethical concerns, promoted self evaluation, and elicited reflection and feedback for the students which all contribute to learning professional values and affective behaviors in the clinical setting (Lisko & O'Dell, 2010).

Clinical instruction evaluation. As facilitators of learning in the clinical environment, CIs should also be evaluated as a way to determine clinical instruction effectiveness. Evaluation of clinical instruction was examined by Gardner (1996) and Stemmans (1999). Gardner examined the interaction and instructors' behaviors used during clinical instruction in athletic training. The study indicated that the majority of clinical instruction was through direct praise and questioning behavior (Gardner, 1996). Gardner's work enabled him to create a Clinical Instruction Analysis Tool-Athletic Training (CIAT-AT) to observe the behaviors of the clinical instructor. Stemmans (1998) further modified the CIAT-AT to observe and identify interactions in athletic training clinical instruction and to compare the behaviors based on the level of experience of the clinician. The results supported Gardner's earlier work in that the study revealed direct teaching from the clinical instructors. Furthermore, the video and behavioral observations revealed that the experience of the clinician influenced the clinical instruction (Stemmans, 1998). The use of the CIAT-AT instrument has been used in the research to document the clinical instruction of athletic training students. A study by Denhup, Sundry, and

Hawkins (2006) found that with the use of the CIAT-AT, students desired more interaction with their CIs; specifically with injury evaluations and rehabilitation skills in the clinical setting. Experiential learning by the student is also associated with increased autonomy and control. When the CI can guide the student to these situations in the clinical environment it can help the student associate more meaning to the event and helps provide a deeper understanding of the skills used during the event (Mensch & Ennis, 2002).

The ability for the CI to adapt to students' learning can also be identified with situational leadership and situational teaching. Situational leadership is developing different leadership styles to fit within different situations (Graeff, 1983; Vecchio, 1987). This provides the leader with flexibility to adapt their style to whatever situation they encounter and allows the leader to change styles based on the maturity level of the follower. According to Graeff (1983), and Vecchio (1987), the amount of situational leadership is reflective of the maturity of the follower involved and is based on a curvilinear relationship between maturity of the follower and the amount of leadership given by the leader. As the level of the follower increased, the leader behavior was less structured and the follower received less socioemotional support (Vecchio, 1987). This type of leadership behavior has also been indirectly evaluated in athletic training CIs. In a study by Weidner, Noble, and Pipkin (2006), the authors showed that the level of leadership and supervision given to the athletic training students was dependent upon their academic standing. For example, senior students were not given as much supervision (or less task structure) as the sophomore students were. Also, these upper level students were less likely to be supervised during sport practices and athletic training room coverage.

Lauber and Killian (2009) describe another type of assessment tool to evaluate CIs called the Clinical Instructor Behavior Instrument (CIBI). This tool was made to evaluate the

effectiveness of each CI based on a quantifiable instrument that tracks interpersonal and

professional behaviors. These CI characteristics are associated with attributes such as honesty,

integrity and being a mentor to ATSs (Lauber & Killian, 2009). This tool can help program

directors evaluate the CIs' effectiveness in dealing with affective behaviors in ATSs.

Furthermore, the CIBI is a way for CIs to reflect on their own strengths and weaknesses by doing

a self-assessment of their interactions with students in the clinical setting.

The leadership style of the CI has the potential to make a huge impact on the clinical

experience of the student; either positively or negatively. First, when the CI uses situational

leadership and incorporates the theory into practice, the student can gain competence,

knowledge, and confidence. Gardner and Harrelson (2002) applied the situational leadership

theory from Blanchard to serve as a model to help CIs progress students from memorizing and

rule-dependent behavior to higher cognitive ability and learning. In this model, the development

of the learner can be broken down into four distinct levels (1-4). The four development levels

are determined by the amount of competence and commitment of the learner. Since the

development level is skill specific, the learners are at different development levels depending on

the specific skill. This model works well with athletic training because there are different

competency requirements that require classroom and clinical observations.

The model Gardner and Harrelson (2002) used also describes four specific instruction

styles that enable the student to develop problem solving and decision making techniques. The

instructions styles are directing, coaching, supporting, and delegating. The key to the successful

outcome of these instructional styles is to match the teaching behavior to the developmental level

of the student. As with situational leadership and instruction, as the learner becomes more

competent, the CI should reduce the amount of directive behavior because the learner should

have developed the skills already but needs the confidence and self-esteem boost to maintain a higher level of learning.

Bridging the gap. As educational standards in athletic training education have increased, a competency and evidenced-based clinical instruction has become prevalent in athletic training education. A major stumbling block in athletic training education is to bridge the communication gap between classroom and clinical instructors. Often there are specific benchmarks of learning the student should be evaluated on throughout the coursework in the clinic. It is the job of the CI to keep communication open to the program director and the clinical education coordinator to make sure proper progress is being made (Weidner & Henning, 2005).

Communication between the classroom and clinical instructor is important to the overall learning atmosphere experienced by the student. Carr and Drummond (2002) found that classroom instructors observed more cooperation in education than their clinical counterparts. The authors theorized that this finding could be due to the way education policy is set. Often, educational standards are set through the accrediting agency and then the curriculum is determined by each institution regarding how to adequately address the competencies and proficiencies of the athletic training student. Perhaps the clinical instructors do not feel they are being included in these decisions. Perceived communication between the groups may increase if the clinical instructors are consulted with program policies and changes. Furthermore, according to CAATE, it is an important part of the standards and criteria to include a variety of clinical rotations that include the collegiate, hospital, physical therapy clinics, and other areas that employ athletic trainers (Williams, 2007). Because there are many clinical instructors working outside of the university, effective communication skills are required to coordinate educational expectations.

Another way to help ATSs make meaningful connections between classroom and clinical learning is to use a research engagement model as a tool in connecting the information. Martin, Myer, Kreiswirth, and Kahanov (2009), explain a model where students are required to employ research skills learned in the classroom to observed injuries from the clinic and then present their research and paper to an audience of peers and instructors. This model ensures the students are employing cognitive skills in combination with clinical skills to produce meaningful interpretations (Martin et al., 2009).

Affective Behaviors in Health Professions

Affective Behavior, Professional Socialization, and Professionalism in Athletic Training

Krathwohl, Boom, and Masia's (1964) work with affective behavior divided the domain into five specific categories that could be observed and evaluated. The five levels of the affective domain are receiving, responding, valuing, organization, and characterized by a value complex. For example, at the receiving level, we would expect to see the student develop an awareness of what attributes to an eating disorder and signs to look for in a patient if an eating disorder is suspected. As the student moves through the affective behavioral objectives, the goal is to transition the student to the valuing domain. It is in this domain that attitude change occurs. So, for example, the student will be aware there is an eating disorder but now the student can seek out answers for reasons behind the eating disorder and internalize the effects the disorder has on an individual. After this the next domain is organization of a value. This category makes the student examine the interrelationships between an eating disorder and other stressors that may cause the disorder. In the affective domain, there is a progression of learning and observable behavior throughout the different categories.

The athletic training *Competencies* and the role delineation study are designed to give educators the "knowledge, skills and clinical abilities to be mastered by the student" throughout the educational process (National Athletic Trainers' Association, 2006, p. 3). The emphasis in the previous statement refers to cognitive abilities with little emphasis placed in the affective domain. The question then becomes do students learn affective behaviors in the clinical setting? And if the answer is yes, then what instructional strategies support affective behavioral learning? Traditionally, it is assumed that ATSs learn appropriate professional behaviors that are associated with the affective domain through the term professional socialization (Pitney, et al., 2002). The role of professional socialization is to prepare learners for the roles and responsibilities of the profession. It also provides a chance for the students to learn how to interact with other professionals, peers, and the patients or athletes they are working with during their clinical practice. This interaction teaches them how to develop interpersonal and intrapersonal intelligence. Professional socialization is a process that allows the student to learn affective behaviors and the roles and responsibilities of the profession to become a member of the professional culture. A study done by Peer and Schlabach (2009), found that out of 219 students surveyed, all of them indicated that "professional values were either important or extremely important" (p. 36). Nearly all of the students indicated it was either important or extremely important to explicitly articulate professional values in athletic training. By incorporating professional values into the classroom and clinical instruction, athletic training students can begin to become better leaders and to be more involved in their professional organization.

Socialization can be broken down into two areas; anticipatory and organization (Pitney et al., 2002). Anticipatory socialization was described as the culture of sport interacting with the

formal preparation and education during the training experience that helped develop and shape the role of the athletic trainer. Organizational socialization is where the student becomes accustomed to the demands placed on the professional as well as the dynamics that govern the clinical education environment (Pitney et al., 2009).

Other research (Klossner, 2008) described professional socialization as a three phase process: recruitment, professional preparation, and organizational socialization. Klossner further surmised that individuals educating athletic training students need to understand that in addition to knowledge gained in the classroom, students are influenced by other factors outside of the classroom during their clinical studies. This study served as a tool to confirm that pre-professional students look to "gain a sense of affirmation and legitimation" (Klossner, 2008, p. 383) from different socializing agents. In the field of athletic training these agents are from peers, coaches, athletes, CIs, and mentors who serve as catalysts for developing their professional roles. Furthermore, the ATSs were aware that there are clearly defined roles and expectations in the ATEP as they progressed during the program. The findings from Klossner (2008) are in contrast to the suggestions of Pitney et al. (2002), where their research described how an informal setting would be most beneficial during the ATSs initial socialization period because it helped promote "self-directed learning among undergraduate students and can potentially better prepare them for the independent learning required in the workplace" (p. 68).

In the athletic training educational competencies, affective behavior skills are addressed in the "Foundational Behaviors of Professional Practice (Behaviors)" chapter of the *Athletic Training Educational Competencies (Competencies)* manual (National Athletic Trainers' Association, 2006). These foundational behaviors define the professional practice and serve as the "application of the common values of the athletic training profession" (National Athletic

Trainers' Association, 2006, p. 5). The behaviors provide examples of what the athletic training

student should be able to do at the end of their educational experience. If the students are not

provided with an opportunity to observe and practice these skills, then the affective behavior

skills will not be met.

   Professionalism is a term used in medicine and other allied health professions when

instructors and students are describing affective behaviors in the clinical setting. Measuring and

describing attitudes and believes toward professionalism is extremely difficult because there is

not a clear definition in the literature (Jha, Bekker, Duffy, & Roberts, 2006; 2007, Miettinen &

Flegel, 2003). Often, professionalism standards deal with specific issues such as ethics,

attitudes, or general demeanor of the student as more of a "cultural issue rather than attitude

toward professionalism as a whole" (Jha et al., 2007). Furthermore, there is limited evidence as

to how medical schools can promote and incorporate professionalism into the curriculum as well

as how to measure and assess these attributes in medical students. The medical community has

recognized the need for professionalism and affective behavior skills as a way to produce a

successful physician. A joined effort between the American Board of Internal Medicine

(ABIM), the American College of Physicians-American Society of Internal Medicine (ACP-

ASIM) and the European Federation of Internal Medicine have produced a physician charter that

looked beyond the cognitive development of the physician and emphasizes the importance of

professionalism that embodies the role of the affective domain (ABIM Foundation, ACP-ASIM

Foundation & European Federation of Internal Medicine, 2002). The charter is meant to reaffirm

the principles of affective behaviors such as commitment to professional competence, honesty,

maintaining trust, and improving access to care. Campbell, Regan, Gruen, Ferris, Rao, Cleary,

and Blumenthal (2007) developed a survey based on the physician charter to explore physician's

thoughts on professionalism. The findings from the research suggest that the professional

attitudes that are embodied in the physician charter are meaningful to physician's which just adds

to the validity of the physician charter. However, while physicians agree with professionalism

standards, not all report that they conform to the professionalism standards (Campbell et al.,

2007).

The American Physical Therapy Association (APTA) has taken their own steps to define

attitudes and behaviors that are vital to the professionalism of their students. Each core value has

a definition and a set of behavioral objectives that serve as indicators of the core value

(American Physical Therapy Association, n.d.). Wolff-Burke, Ingram, Lewis, Odom, and Shoaf

(2007) identified generic professional demeanors that are not appropriate in physical therapy

students based on literature from previous researchers. From these inappropriate demeanors and

attitudes, a rubric was designed that allowed the CI to identify these behaviors and assess

students' professionalism. Through a series of questions, CIs have a concrete mechanism to

identify professionalism in students that coincide with the APTA's core values that identify

affective behaviors.

The medical community has produced examples in the literature that show developing

professionalism is a process that should begin with curriculum that does more than use role

modeling as a way to pass along professional values and affective behaviors (Elliott, May,

Schaff, Nyquist, Trial, Reilly, and Lattore, 2009). Elliot et als., (2009) longitudinal study

developed strategies of teaching to create a new environment for curricular learning in their

medical students. The authors concentrated on a curriculum that included ethics, empathy,

professional development, communication skills, and cultural competence to students that were

in their preclinical training. The students were able to gain a broad understanding of the all

encompassing skills required of them to be a successful physician beyond the cognitive realm of learning. As the importance of affective behavioral objectives in learning began to take shape in the medical teaching community, instructors should understand interconnectedness of the cognitive, affective, and psychomotor domains of learning. Once instructors determined the importance of all the domains of learning, it was necessary to incorporate all the domains into the learning and instruction for the continued literacy and lifelong learning objectives of the student.

Research into professionalism in athletic training seems limited. In athletic training, attitudes are formed and shaped through a multidisciplinary procedure that includes a mentoring process, professional socialization development, and interactions between staff, faculty, peers, and patients (Hannam, 2000). There are multiple studies that skirt the topic of professionalism; the effects of interpersonal relationships (Scifers & Manners, 2005), or professional development for athletic training students (Gardiner & Mensch, 2004) but there is limited research on the techniques used by clinical instructors to promote professionalism and affective behaviors. A dissertation by Thompson (2007) found that students were more likely to exhibit the professional behaviors described in the *Competencies* in the clinical setting. The study categorized 95 behaviors and asked athletic trainers to rank them in order of importance. The most important categories of behaviors were the quality of care, confidentiality, and safety. Of the top five behaviors ranked in this study, only two were identified as the behaviors associated with the affective domain. Behaviors that exhibited empathy, teamwork, recognizing the abilities of other professionals were ranked in the lower third of the behaviors (Thompson, 2007).

Athletic trainers deal with matters of great personal and emotional importance to the individuals with whom they work on a daily basis. Often times, when an individual is

performing rehabilitation due to an injury, the athletic trainer must be attuned to the emotion and personality of the individual. Without this insight, the athletic trainer may not know if they are pushing hard enough or too hard through the exercise, if the patient is bored, if the patient is in pain, or if the patient is going through other personal conflicts that may be affecting their treatment. The ability for the athletic trainer to accurately read the individual is paramount in making an effective treatment plan.

Theoretical Framework

There are two psychological frameworks that serve as a foundation for this study. Howard Gardner's theory of multiple intelligence and the theory of emotional intelligence was also expanded on by Daniel Goleman who worked with both emotional and social intelligence. Rosabeth Moss-Kanter's leadership theories from "*Confidence*" describe the attributes of confidence, accountability, collaboration, and initiative which are essential to the development of the athletic training student.

Howard Gardner's Theory of Multiple Intelligence

Howard Gardner's research is founded on the disbelief in a single intelligence in all individuals. He believed that Piaget's intelligence theory was incomplete and set out to try to understand the intelligences he deemed as *human intelligences* (Gardner & Hatch, 1989). It was through his work in 1983 that he identified seven key intelligences that were evident of individuals from all mental backgrounds. In his famous book, Frames of Mind (1983), Gardner outlines his research and identifies all intelligences. Gardner and Hatch (1989) argued that "in contrast to traditional paper-and-pencil tests, with inherent bias toward linguistic and logical skills, intelligence-fair measures seek to respect the different modes of thinking and performance that distinguish each intelligence" (p. 6). Gardner proposed seven intelligences: linguistic,

logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal (Gardner, 1983; Gardner & Hatch, 1989).

The linguistic intelligence is identified as a master of words and language. The intelligent linguist learns to use language as a way to manipulate, explore new ideas, cultivate questions, and guide others' imagination. The linguist has sensitivity to the words, sounds, and rhythms of the language (Gardner & Hatch, 1989). A person with logical-mathematical intelligence will be able to understand and examine numerical patterns. This intelligence also enables the person to see the bigger picture and overachieving results to a complex range of problems. An example given by Gardner (1983) was that of a biologist who can examine the movement of an amoeba and apply the principles to the animal kingdom and then end up with a theory of human movement. If an individual can test high in math, logic, and language skills then there is a good chance they will do well on standardized testing.

The next categories of intelligences are the musical, spatial, and bodily-kinesthetic intelligences. Musical intelligence is categorized by the ability to appreciate, produce and analyze rhythm and pitch. Spatial intelligence is to visually imagine a model or idea and then be able to perform the task required to complete the initial perception of the model. Bodily-kinesthetic intelligence is the ability of an individual to control and coordinate their body part(s) to move skillfully and with purpose (Gardner & Hatch, 1989). These intelligences are not as often thought of as intelligences by many researchers and especially not by Piaget, however, Gardner (1983; 1993) theorized that each person has different degrees of intelligences based on different types of these intelligences.

The final two intelligences introduced by Gardner are interpersonal and intrapersonal skills of an individual. These skills often translate into occupations such as a teacher, clinician,

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salesman, and politician. These intelligences act as an ability to read peoples' moods,

temperaments, personalities, and motivations in addition to one's own feelings and strengths and

weaknesses (Gardner & Hatch, 1989). These skills collectively helped to influence the

theoretical framework for emotional intelligence as a separate intelligence from Gardner's theory

but with similar foundational work expanded into a new domain.

Daniel Goleman's Theory of Emotional and Social Intelligence

In 1995, Daniel Goleman's book *Emotional Intelligence* was released and defined five

domains of emotional intelligence. The domains are: knowing one's emotions, managing the

emotions, motivating oneself, recognizing emotions in others, and handling relationships

(Goleman, 1995). A major part of Goleman's work is how to apply emotional intelligence.

The difference of gender in emotional intelligence has been examined as a significant

factor between the sexes. Women often become better at reading verbal and nonverbal signals as

well as expressing their feelings while men tend to shy away from the emotions that make them

feel vulnerable (Goleman, 1995). This basic relationship principle can be applied in the

relationships between men and women in marriages, classrooms, and business.

Being emotionally intelligent also helps an individual motivate someone else through

kind words or positive reinforcement. Furthermore, it is important to offer feedback, listen to

others' concerns or ideas, and be sensitive or empathetic to others' feelings. A more emotionally

intelligent individual is able to collaborate with others and cultivate relationships between

individuals that allow them to seemingly succeed where others have not. This "handling

relationships" is one of the major points of interpersonal and intrapersonal areas that are a key

factor in emotional intelligence.

Another area of the emotionally intelligent individual is the power of optimism. Creating and cultivating a positive environment is essential for the leader and the followers to be truly productive in whatever endeavors the individual is following. Negative or toxic anger decreases productivity, creates anxiety in the workplace, and makes everyone seemingly unable to perform the duty they set out to accomplish. Goleman (1995) points out examples of how this is especially true in the medical profession. Individuals who are more optimistic tend to do better in surgery, recovering from illness, and overall general health. Controlling and managing one's emotions is another example of how an increased emotional intelligence can help the overall health of an individual's life. Furthermore, the idea of the emotionally intelligent person in medicine can be applied to the physician as well as the patient. Goleman (1995) makes two major points. First "helping people better manage their upsetting feelings-anger, anxiety, depression, pessimism, and loneliness-is a form of disease prevention" (p. 183). Second, "many patients can benefit measurably when their psychological needs are attended to along with their purely medical ones" (p. 184). These two statements are an indication that patients need to hear encouraging, positive words from their physician that will help increase the doctor-patient relationship as well as possibly increasing the trust in the relationship. Furthermore, patients who are more satisfied with their medical care and experience will be more apt to come back for repeat visits and examinations (Goleman, 1995). The same can be said for athletic trainers. Those who inspire trust and cultivate interpersonal relationships with patients should be those individuals with higher emotional intelligence. The higher level of emotional intelligence will enable the athletic trainer to thrive in the social setting of the workplace.

The ideas of Goleman and Gardner are all theoretical frameworks that expand upon one another. The basic framework for each is that the traditional measurement of intelligence

described by Piaget does not account for all the intelligence. The concept and uses for emotional intelligence are evolving and is employed as a resource tool to improve performances in physicians, nurses, businesses, and professions that deal with interpersonal relationships.

Rosabeth Moss Kanter and *"Confidence"*

In Moss Kanter's *Confidence* (2006), she identified four key principles to maintain the cycle of success: confidence, accountability, collaboration, and initiative. These principles can be applied to individuals' personal or professional endeavors. The first principle, confidence, is about believing in yourself which leads an individual to try harder and longer. Individuals who are convinced they will succeed are also more likely to believe their future will pay off in the long run and will continue to persist even in the event of adversity (Moss Kanter, 2006). The next principle is accountability and is the "cornerstone of confidence" (Moss Kanter, 2006, p. 182). In order to be accountable for one's actions there must be clear expectations, admission of problem areas, open communication, and performance assessment. People who want to be accountable seek the opportunity to take responsibility because they feel committed to the successful outcome of the project or task because they have set high standards for themselves and others.

The next principle is collaboration. Collaboration includes sharing ideas and goals with one another, respecting others' ideas, and establishing new connections between individuals (Moss Kanter, 2006). This is a key attribute in confidence because collaboration helps to build interpersonal bonds between individuals that will help the success of not just the few but the many who participate in collaborative activities. The collaboration builds confidence in challenging times because there are shared goals and ideas which help the relationships grow stronger. Furthermore, collaboration allows individuals to want to work together and get to

know each other in a variety of settings which fosters better chemistry and promotes creative thinking. The final piece to the confidence puzzle is initiative and innovation (Moss Kanter, 2006). In an example from Moss Kanter, the British Broadcasting Corporation (BBC) was revitalized after 2000 by a new director-general who increased stakeholder commitment to the organization by giving them more responsibility as well as more accountability. These actions led to greater stakeholder initiative and innovation because there was greater collaboration throughout the organization. By increasing the confidence, respect, and placing the power of creative thought back to the employees, the new director-general was able to turn a losing cycle into a success.

The principles can certainly be applied to the role of the athletic training student in the educational process. Instructors can increase the amount of autonomy given to the student which will help boost their confidence through appropriate positive feedback. Furthermore, cultivating a positive environment for learning by encouraging collaboration with other students, innovation of new rehabilitation programs or ideas, and through accountability of learning, the instructors can foster a wonderful successful learning experience for each student. Using these ideas can help increase the emotional intelligence of an individual that will set the student up for future success.

Summary

Education in undergraduate athletic training students is a didactic blend of classroom theory and clinical experiences. Not only do students learn to put theory into practice but they learn professionalism and affective behaviors. These observable behaviors become the core values of their professional beliefs that will stay with them throughout their careers. It is important for the instructors to provide a positive learning atmosphere for the students which will

help the students gain confidence and improve their professional skills thereby creating a climate

for a successful future.

Chapter III

METHODOLOGY

The primary goal of this dissertation was to determine CIs' perception of affective

behavior and the role it has in athletic training clinical education. Clinical education provides an

opportunity for students to observe the interactions of their CIs and become directly involved in

patient care. Clinical education serves as more than a complement to the classroom studies but

as a way to practice and experience hands-on activities that link theory taught in the classroom to

the application in the clinic. Through clinical experiences, students gain the understanding and

competence to regulate and develop meaningful relationships between patients, peers, and

instructors, to learn the roles and responsibilities of the profession and to become a member of

the professional culture (Laurent & Bradley, 2007; Klossner, 2008). These constant interactions

teach the students how to develop interpersonal and intrapersonal intelligence and affective

behaviors by emulating their clinical instructors (Robertson, 2007; National Athletic Trainers'

Association, 2006).

The interactions between the student and CI are a key factor in the development of

affective behavior skills and core values in the profession of athletic training. Affective

behavioral skills have the potential for far reaching effects for the professional socialization and

ultimate overall success of the athletic trainer. This survey was designed to explore the impact

of clinical instructor experience, NCAA division standing, years as a certified athletic trainer and

gender with regard to the perception of the development, importance, and opportunity to practice

affective behaviors in athletic training students.

Research Questions

1. What types of feedback do clinical instructors use most often in the clinical experience to develop and evaluate affective behaviors in the clinical setting? Do years of experience as an athletic trainer, gender, years as a clinical instructor, NCAA affiliation and job setting matter?

2. Do clinical instructors feel affective behaviors are an important aspect in the clinical education of an athletic training student?

3. How important do clinical instructors perceive the practice of affective behaviors by athletic training students in the clinical setting?

Population Selection

The subjects selected for this study were CIs in a Commission on Accrediting Athletic Training Education (CAATE) approved athletic training education programs (ATEPs). There are currently 342 different undergraduate ATEPs in the country. There is currently no database list available of clinical instructors in the country so there is not a clear number of potential subjects. The amount of CIs involved with each university is varied depending on factors such as ATEP student enrollment (because of accreditation standards), who is defined as a CI with each institution (some faculty members are not CIs), and the amount of clinical sites associated with the university (clinical, collegiate, high school, physician extender, etc.).

To recruit subjects for this study, three different subject recruitment techniques were utilized. First, the researcher contacted all the program directors from each CAATE program to obtain contact information for the clinical instructors associated with each university. The researcher received 114 clinical instructors' names and email information through this subject recruitment technique. After the researcher's initial contact, some program directors replied to the researcher's emails requesting the survey link be directly sent to them because they had

reservations about releasing the CIs contact information. Since some program directors

requested the link to forward, the researcher wanted to maximize potential survey returns so the

survey link was emailed to all program directors of undergraduate ATEPs listed on the CAATE

website and were asked to forward the survey link to their CIs. The CIs could then choose to

participate by clicking on the survey link. The final recruitment technique used to gain more

respondents was to randomly select ATEPs listed on the CAATE's website and to search clinical

instructor contact information directly from the ATEP or athletic website of the college or

university. If no email addresses were found on the college or university website but names

were found, then the researcher searched the NATA database for directory information. Any

contact information forwarded by the program directors or obtained through researching ATEP

websites was then put into a created a panel of email addresses in the online survey program,

Qualtrics. A random sample was an appropriate technique since it allowed the researcher to

work with a sample that reflected the population of CIs who work in different environments

under different conditions and would reflect a proportion of CIs throughout the country.

Once the database was compiled, the researcher sent out emails to invite the CIs' to

voluntarily participate in the survey. For those ATEP program directors who requested the

survey be sent directly to them for distribution to the CIs, they were sent a survey link emailed so

they could forward the survey to the appropriate CIs. This method did not allow the

participation rate to be calculated. The email sent to the potential subjects contained the

informed consent document and a link to the survey. By clicking on the link to the survey, the

CIs agreed to participate in the study. A follow-up email was sent 10 days after to the initial

invitation. A final email was sent 10 days after the initial invitation. To increase response rates

to the survey, the survey was available until the final reminder survey was sent. In total, the

survey was available to be filled out for a total of 12 weeks. At the end of 12 weeks, a total of

174 respondents recorded some data to the survey with 134 completed survey instrument.

Instrument Design

This research sought to answer research questions that identified the types of feedback

CIs most often give to ATSs, the perception of the importance of affective behavioral skills, and

the importance of practicing these skills in a clinical setting. According to Black (1999) surveys

or questionnaires reflect the "strength of attitudes, perceptions, views and options" (p. 215) of

those being surveyed, therefore, a survey is appropriate for this study.

The survey statements were designed and aligned with the *Foundational Behaviors of*

Professional Practice (National Athletic Trainers' Association, 2006)*; which were derived from

Bloom's *Taxonomy of Educational Objectives* (Krathwohl et al., 1964). Extensive research in

medical and other allied health professions that examined areas of affective behavior,

professionalism, value setting, pedagogical strategies in teaching affective behavior, and moral

and ethical decision making were examined. The information from the *Foundational Behaviors*

of Professional Practice and the information gathered from the research helped the researcher to

develop the survey (Appendix A). The survey used for this study is available under Appendix B.

Procedures

Expert Panel

An expert panel consisting of five individuals was identified by the researcher to provide

content validity to the survey. Two individuals have been athletic trainers for more than 20

years, 1 for approximately 15 years, and 2 for 10 plus years. Each expert had been or is currently

a CI. Three of the experts currently instruct and supervise students in their clinical education and

two experts have been CIs within the last 10 years.

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Once the experts agreed to participate in the validation process the survey was sent to them electronically. Prior to sending the survey to the expert panel, the survey was revised and reworded several times. The current survey was divided into sections to address each of the research questions. The experts were asked to read the survey and to rate the relevance of each statement as follows: eliminate, not sure of the value, good but revise, keep. Additionally, experts were asked to identify whether statements were considered affective or cognitive in order to provide further content validity. Since there were five experts, each statement had to have at least three experts agree regarding whether the statement was cognitive or affective.

The experts were given two weeks to review and evaluate the survey. After the completed surveys were returned to the researcher via email, she reviewed all comments from each expert. Statements from the survey that were identified by the experts as needing revision were revised based on the comments from the experts. Statements that were identified as questions to keep without revision were added to the final survey. Statements that were identified as not sure of value or to be eliminated based on a majority of the experts were taken out of the survey. After the revisions were made, a spreadsheet was constructed to identify statements that were considered affective or cognitive by the majority of the expert panel. After examining the results of the expert's opinions, the researcher revised statements to ensure there was consistency in terminology based on the expert's opinions and revision suggestions.

Pilot Study–Focus Group

A pilot study was performed to help refine the survey questions and procedures statements for this study. A pilot study was used to enable the researcher to sort out any technical problems with survey delivery, to make sure the statements were understandable to the reader and enabled the researcher to make sure she is capturing the data correctly (Robson, 2002).

A pilot focus group was assembled by the researcher to identify any further questions or inconsistencies and to determine if the length of the survey was appropriate and not too time consuming. A group of three CIs agreed to participate in the focus group and to meet with the researcher to discuss their observations. The three participants were emailed the survey and a meeting time was set to discuss the survey. At the conclusion of the session there were five important themes that were identified by the researcher based on the focus group's comments.

The first comments the focus group detailed was the length of time it took to answer the survey. The average time to answer the survey was approximately 11 minutes, so the focus group participants determined that the length of the survey was appropriate and not too time consuming. The second set of comments detailed by the focus group was concerning the use of scenarios in the survey. There were four scenarios in the survey that were then followed by a set of six statements that were to be rated based on perceived importance. The focus group suggested consolidating the scenario section into either one or two scenarios followed by more statements. The focus group felt the scenario section was a bit too long and would be more reader friendly that way. The group also suggested to keep all the statements from the other scenarios, just make them applicable to the scenario(s) that were ultimately kept.

A third important change to the survey suggested by the focus group was centered on the section that asked the respondents to identify three different core values that were important to the athletic training profession. The focus group felt that this question was too vague but still important to include due to the nature of the research questions so it was suggested by the researcher to make a list of 10 choices and have the survey respondents rank in order of importance the top 3 behaviors that described core values of the athletic training profession. All

focus group members agreed that there should be a choice and this change should be made to the survey.

A fourth change to the survey was made in the second section of the survey. The focus group agreed that all the sections should be consistent so each statement in the first and second section should begin with "I" as the beginning for all statements. This change was made based on those suggestions. The final main change initiated from the focus group was to incorporate a question about evidence-based practice in a more specific way because this is a major curriculum objective in the athletic training profession. Instead of a vague question about evidence-based practice the focus group suggested to ask specific questions about evidence-based practice that determined if CIs performed research, read journals, or attended symposiums that added to their knowledge of evidence-based practice. This suggestion was taken into consideration throughout the survey and statements were added in where necessary.

Pilot Study – Survey Group

The CIs selected to participate in the pilot study were associated with 30 different CAATE athletic training education programs (ATEPs) selected at random throughout the 10 different NATA districts. The NATA splits the country into districts depending on the states' geographical region. Three ATEPs were randomly selected from each NATA district to be included in the pilot study. The program directors from each CAATE program were contacted through an email that outlined the purpose of the study, indicated IRB approval, and detailed the expected outcomes of the study. The email also asked for the contact information of the CIs associated with the CAATE program so they could be invited to participate in the study. After the contact information for the CIs was received, a spreadsheet was created that displayed the email addresses of the clinical instructors. Once the email addresses were compiled, a panel was

created in the Qualtrics online survey program. The CIs were emailed a secure link to the survey so they could participate in the study.

At the completion of the pilot surveys, the data were transferred to the SPSS software system for analysis. The survey was analyzed for reliability by breaking the survey into four sections due to the diversity of the questions asked in the survey. The first section of the survey consisted of questions dealing with the first research questions and determined how CIs provide feedback to the students. There were a total of five questions in the section with the fifth question asking the CIs to provide an answer that was not a Likert scaled item as was the case for the first four questions. Therefore, Cronbach's Alpha used to determine reliability on the first four questions in the section. According to Pallant (2010), using Cronbach's Alpha on a small item scale (fewer than 10) can produced a low reliability value. Therefore, since there were only four items in this section that were used for reliability, a mean inter-item correlation value was used to report the reliability. In this case, the four questions produced an inter-item correlation value of .329. Optimum mean inter-item correlation values range from .2 to .4 (Pallant, 2010).

The fifth question in this section was analyzed with the other four questions through descriptive statistics. The descriptive statistics showed that 75 % of the responding CIs acknowledged the use of formative assessments during the ATSs clinical instruction. The researcher further contacted the individuals in the focus group pilot and they all agreed that the fifth question in the section did correspond with the other four questions so the section was deemed to be reliable based on the inter-item correlation and the feedback from the pilot group.

The second section of the survey was designed to identify CIs' perceptions of the importance of cognitive and affective behaviors in athletic training students. It was also designed to determine the opportunity to practice affective behaviors in the clinical setting. The

pilot survey results were put into SPSS to determine reliability. Cronbach's Alpha showed there was a reliability of .923, so this section was not altered in any way after the pilot study.

The third section in the survey asked CIs to rank core values a total of 10 behaviors; 5 affective, and 5 cognitive that described professional values in athletic training. This section of the survey was initially changed after the pilot focus group to include a rank of the top three based on the focus group's recommendation that is detailed in the pilot-focus group section above. However, after this section was taken by the pilot survey group, it was determined that CIs should list the top five professional values to get a better understanding of the professional values that are most important to the CIs. Further, the pilot survey revealed that an error was made by the researcher in the list of professional values with two of the same values being on the list together. This error was corrected for the final survey that was sent to the experimental group of clinical instructors. The focus-pilot group did agree that the 10 total professional behaviors listed on the survey were indeed 5 affective and 5 cognitive so the professional behaviors that were listed did not change from pilot to final survey.

The last section on the survey consisted of two different scenarios so each scenario was analyzed separately using Cronbach Alpha statistics for reliability. These scenarios were designed to determine the CIs' perception of the importance of affective behaviors and opportunities available for ATSs' to practice athletic training skills. The first scenario and second scenario had a reliability score of .793 and .714 respectively. Any number above .7 is determined to be reliable (Pallant, 2010) so these scenarios were not changed in any way from the pilot study to the final survey.

By assessing the questions in this manner the researcher was able to refine the survey to ensure the content was valid and the information was reliable. Any changes to the survey were

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made based on the information gathered in the pilot study to ensure the survey was not lengthy and to maximize return rates for respondents.

Data Collection and Analysis

The ATEPs that were used for the pilot focus group and the pilot survey group were excluded from the final administered survey. The data collected from the surveys were transferred from Qualtrics to SPSS for analysis. Descriptive statistics for all demographic information were included in the final report. The survey was divided into four different groups strategically designed to answer the research questions. The first section was analyzed using Chi Square. The second section grouped cognitive and affective statements into categories as the dependent variables. The section was then statistically analyzed using both t-tests and one way analysis of variance with post-hoc comparisons to explore the differences between each of the groups in this study. The post-hoc test was the Tukey Honestly Significant Different (HSD) test (Pallant, 2010). The third section used descriptive statistics to describe how clinical instructors rate both cognitive and affective core values in athletic training. The final section grouped cognitive and affective statements together to form two different dependent variables and t-tests and a one way analysis of variance was used to compare means versus the independent variables.

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Summary

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A survey design was chosen for this study because it is most suited to answer the questions of how athletic training education programs are incorporating the affective domain of learning in ATS clinical experiences. The results from this study should provide feedback as to the perceived importance of the affective domain in athletic training education. This study also provided clinical educators information on the importance of incorporating affective behavioral skills in the clinical setting to develop the professional values in athletic training that are

advocated by the NATA in the Foundational Behaviors of Professional Practice (National

Athletic Trainers' Association, 2006).

Chapter IV

DATA AND ANALYSIS

This chapter describes the results and analysis of this research study conducted to

determine the perception of athletic training CIs in using affective behaviors in clinical settings.

The application of cognitive, psychomotor, and affective clinical skills provides important

practical learning opportunities for undergraduate ATSs. The constant interactions between

peers, patients, and other professional staff provide the ATSs with the opportunity to understand

their professional role in the athletic training culture and profession. This research was aimed at

providing a better understanding of the perception of using affective behaviors by CIs in various

clinical educational settings.

The data were collected using an email survey that was sent to over 550 CIs around the

country. To increase the respondent pool, each undergraduate athletic training education

program director was also emailed the survey link to forward to their CIs. The respondents'

surveys were recorded anonymously using the Qualtrics online survey program and exported to

SPSS for analysis. Multiple statistical techniques were used to analyze the data in this study.

Chi Square, independent T-test, and Analysis of Variance were used to determine if there were

any significant findings in the survey instrument.

Sample Population

The respondents for this survey included any clinical instructor associated with an

undergraduate athletic ATEP nationwide. Over 550 CIs were contacted via email to participate

in this study. There are currently 341 undergraduate ATEPs throughout the country. All

program directors associated with these colleges and universities received an email with an

invitation to participate in the study along with a link to the survey. The program directors were

asked to forward the survey link to all the CIs associated with their ATEP. A total of 174

respondents began the survey and 134 completed the surveys. There were a total of five

independent variables: years of experience as a ATC, gender, length of time as a clinical

instructor, the university's NCAA division affiliation, and job setting.

Descriptive Statistics

Table 1 shows that 77 (58.8%) of the participants had 1-10 years of experience as an

ATC, 35 (26.7%) had 11-20 years as an ATC, and 19 (14.5%) had more than 20 years of

experience as a certified athletic trainer.

Table 1

Years as a Certified Athletic Trainer

Years	Frequency	Percent
1-10	77	58.8
11-20	35	26.7
More than 20	19	14.5
Total	131	100.0

To address the purposes of this research, the amount of years as an ATC was collapsed

into two groups: 1-10 years and 11 or more years as an ATC. Table 2 represents the grouped

results where 77 (58.8%) of the respondents were in the 1-10 year category and 54 (41.2%) were

in the 11 or more years category.

Table 2

Years as a Certified Athletic Trainer Grouped

Years	Frequency	Percent
1-10	77	58.8
More than 11	54	41.2
Total	131	100.0

Table 3 shows that males and females were equally represented; 66 (50%) females and 66 (50%) males.

Table 3

Gender of Participants

Gender	Frequency	Percent
Female	66	50.0
Male	66	50.0
Total	132	100.0

Table 4 shows that 109 (82.0%) of the respondents have been CIs for 1-10 years, 19 (14.3%) have been CIs for 11-20 years and 5 (3.8%) have been CIs for more than 20 years.

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Table 4

Length of Time as a Clinical Instructor

Years	Frequency	Percent
1-10	109	82.0
11-20	19	14.3
More than 20	5	3.8
Total	133	100.0

For purposes of this research, years as a CI was grouped into categories of 1-10 years and 11 or more years as a CI. Table 5 shows that 109 (82%) of the respondents were CIs for 1-10 years while 24 (18%) were located in the 11 or more years group.

Table 5

Length of Time as a Clinical Instructor

Years	Frequency	Percent
1-10	109	82.0
11 or more years	24	18.0
Total	133	100.0

Table 6 shows that 60 participants, (49.2%) worked at or with a Division I institution, 33 (27.0%) worked at or with a Division II institution and 29 (23.8%) worked at a Division III institution. Fifty-five respondents (31.1% of total) did not specify their NCAA affiliation or were not associated with a NCAA institution.

Table 6

Participant National Collegiate Athletic Association Affiliation

Division	Frequency	Percent
Division I	60	49.2
Division II	33	27.0
Division III	29	23.8
Total	122	100.00

Table 7 shows that 100 (75.8%) of the respondents were employed at a

college/university, 22 (16.7%) were employed in a high school setting; 7 (5.3%) were employed

at a clinic/outreach position; 1 (.8%) was employed in an industrial setting and 2 (1.5%) listed

other as their employment setting.

Table 7

Job Setting

Setting	Frequency	Percent
College/University	100	75.8
High School	22	16.7
Clinic/Outreach	7	5.3
Industrial	1	.8
Other	2	1.5
Total	132	100.0

For purposes of this research the job setting of each respondent was collapsed into two

different categories; college/university setting or other. Table 8 shows 100 (75.8%) of the

respondents were grouped into the college/university setting while 32 (24.2%) were grouped into other.

Table 8

Job Setting Grouped

College/University	100	75.8
Other	32	24.2
Total	132	100.0

Research Questions

There were three research questions:

1. What types of feedback do CIs use most often in the clinical experience to develop and evaluate affective behaviors in the clinical setting? Do years of experience as an athletic trainer, gender, years as a clinical instructor, NCAA affiliation and job setting matter?

2. Do clinical instructors feel affective behaviors are an important aspect in the clinical education of an athletic training student?

3. How important do clinical instructors perceive the practice of affective behaviors by athletic training students in the clinical setting?

Results

The first research question examined if CIs used affective feedback techniques in the clinical experience when working with undergraduate ATSs. Chi-Square was used to determine if there were significant differences in how affective behaviors are used in clinical settings.

Table 9 shows that athletic trainers with 1-10 years of experience significantly differed (p < .009) from athletic trainers with 11 or more years of experience regarding their perception of

using real-life examples in the clinical experience. Ninety-nine percent of the athletic trainers with 1-10 years of experience always or usually use real-life examples as a way to provide feedback to ATSs during the clinical experience. Eighty-eight percent of athletic trainers with 11 or more years of experience always or usually use real-life examples as a way to provide feedback to ATSs during the clinical experience. Eleven percent of athletic trainers with more than 11 years of experience said they sometimes use real-life examples. Both groups had a positive perception of the using real-life examples in the clinical setting.

Table 9

A Comparison of the Use of Real-Life Examples with the Students in the Clinical Setting in Order to Foster Discussion of Best Patient Care with Athletic Training Students versus Years as an Athletic Trainer

Years	Always	Usually	Sometimes	Rarely	Do Not Use
1 – 10	46.8% (36)	51.9% (40)	1.3% (1)	0.0	0.0
11 or more	57.4% (31)	31.5% (17)	11.1% (6)	0.0	0.0

Note. p <.05.

Table 9 is the only one that shows a significant difference between the use of real-life examples in the clinical setting and the independent variables. The following tables present the independent variables compared with the use of real-life examples in the clinical setting along with the results. All independent variables had a positive perception of using real-life examples in the clinical setting in order to foster discussion of best patient care with the ATSs.

Table 10 shows that males and females did not significantly differ in attitudes toward using real life examples in clinical settings (p = .252).

Table 10

A Comparison of the Use of Real-Life Examples with the Students in the Clinical Setting in

Order to Foster Discussion of Best Patient Care with Athletic Training Students versus Gender

Gender	Always	Usually	Sometimes	Rarely	Do Not Use
Males	54.5% (36)	37.9% (25)	7.6% (5)	0.0	0.0
Females	47.0% (31)	50.0% (33)	3.0% (2)	0.0	0.0

Note. p >.05.

Table 11 shows that the use of real-life examples with the ATSs in the clinical setting

showed no significant difference in attitude when compared with length of time as a clinical

instructor (p = .264).

Table 11

A Comparison of the Use of Real-Life Examples with the Students in the Clinical Setting in

Order to Foster Discussion of Best Patient Care with Athletic Training Students versus Length of

Time as a Clinical Instructor

Years	Always	Usually	Sometimes	Rarely	Do Not Use
1 – 10	48.6% (53)	46.8% (51)	4.6% (5)	0.0	0.0
11 or more	62.5% (15)	29.2% (7)	8.3% (2)	0.0	0.0

Note. p >.05.

Table 12 shows that the use of real-life examples with the ATSs in the clinical setting

showed no significant difference in attitude when compared with NCAA affiliation (p = .665).

Table 12

A Comparison of the Use of Real-Life Examples with the Students in the Clinical Setting in Order to Foster Discussion of Best Patient Care with Athletic Training Students versus National Collegiate Athletic Association Affiliation

NCAA Affiliation	Always	Usually	Sometimes	Rarely	Do Not Use
Division I	48.3% (29)	45.0% (27)	6.7% (4)	0.0	0.0
Division II	54.5% (18)	39.4% (13)	6.1% (2)	0.0	0.0
Division III	65.5% (19)	31.0% (9)	3.4% (1)	0.0	0.0

Note. $p > .05$.

Table 13 shows that the use of real-life examples with the ATSs in the clinical setting showed no significant difference in attitude when compared with job setting ($p = .420$).

Table 13

A Comparison of the Use of Real-Life Examples with the Students in the Clinical Setting in Order to Foster Discussion of Best Patient Care with Athletic Training Students versus Job Setting

Job Setting	Always	Usually	Sometimes	Rarely	Do Not Use
College/ University	54.0% (54)	41.0% (41)	5.0% (5)	0.0	0.0
Other	40.6% (13)	53.1% (17)	6.3% (2)	0.0	0.0

Note. $p > .05$.

The following tables present the analysis of CIs' attitude of the use of written feedback in the clinical setting. Table 14 shows that athletic trainers with 1-10 years of experience significantly differed (p = .006) from athletic trainers with 11 or more years of experience regarding their perception of using written feedback in the clinical experience. Table 14 shows that 63.5% of the athletic trainers with 1-10 years of experience always or usually use written feedback as a way to provide information to ATSs during the clinical experience. Seventy-eight percent of athletic trainers with 11 or more years of experience always or usually use written feedback as a way to provide feedback to ATSs during the clinical experience. Thirty-six percent of athletic trainers with 1-10 years of experience and 22% of athletic trainers with 11 or more years of experience said they sometimes use written feedback. Both groups had a positive perception of the use of written feedback in the clinical setting however the ATCs with 11 or more years of experience had a higher percentage of usually or always using written feedback as a way to provide feedback to ATSs compared with those athletic trainers with 1-10 years of experience.

Table 14

A Comparison of the Use of Written Feedback on the Athletic Training Student's Progress

During Their Clinical Experience According to Years as an Athletic Trainer

Years	Always	Usually	Sometimes	Rarely *	Do Not Use
1 – 10	31.1% (23)	32.4% (24)	36.5% (27)	0.0	0.0
11 or more	60.0% (30)	18.0% (9)	11.0% (22)	0.0	0.0

Note. *These data were eliminated to ensure that no assumptions were violated. p >.05.

Table 15 shows a comparison of male and female athletic trainers' perception of providing written feedback. It appears that females always or usually provide significantly more (p = .026) written feedback (75%) compared with males (54%).

Table 15

A Comparison of the Male and Female Use of Written Feedback on the Athletic Training Student's Progress During Their Clinical Experience

Gender	Always	Usually	Sometimes	Rarely	Do Not Use
Males	30.3% (20)	24.2% (16)	36.4% (24)	9.1% (6)	0.0
Females	51.5% (34)	24.2% (9)	22.7% (15)	1.5% (1)	0.0

Note. p <.05.

Table 16 shows athletic trainers with 11 or more years of experience had a significantly higher use of written feedback compared with those with only 1-10 years experience as a clinical instructor (p = .020). Overall, however, both groups have a positive perception of the use of written feedback.

Table 16

A Comparison of the Years of Experience as a Clinical Instructor on the Use of Written Feedback on the Athletic Training Student's Progress During Their Clinical Experience

Years	Always	Usually	Sometimes	Rarely *	Do Not Use
1 – 10	37.3% (38)	30.4% (31)	32.4% (33)	0.0	0.0
11 or more	66.7% (16)	8.3% (2)	25.0% (6)	0.0	0.0

Note. *These data were eliminated to ensure that no assumptions were violated. p <.05.

Tables 9 through 16 are the only ones that show a significant difference between the use of written feedback in the clinical setting and the independent variables. Tables 17 and 18 present each other independent variables compared with the use written feedback in the clinical setting along with the results.

Table 17 shows that there was no significant difference between the use written feedback compared with the NCAA affiliation (p = .421). CIs affiliated with Division I institutions reported 40% of the time they sometimes or rarely use written feedback compared with 24% and 27% of Division II and III institutions, respectively. Overall, all groups had a higher percentage of always or usually providing written feedback in the clinical setting.

Table 17

A Comparison of the National Collegiate Athletic Association Affiliation on the Use of Written Feedback on the Athletic Training Student's Progress During Their Clinical Experience

NCAA Affiliation	Always	Usually	Sometimes	Rarely	Do Not Use
Division I	33.3% (20)	26.7% (16)	33.3% (20)	6.7% (4)	0.0
Division II	57.6% (19)	18.2% (6)	18.2% (6)	6.1% (2)	0.0
Division III	48.3% (14)	24.1% (7)	24.1% (7)	3.4% (1)	0.0

Note. p >.05.

Table 18 shows that there was no significant difference between the use written feedback compared to job setting (p = .154). Sixty-eight percent of college/universities CIs and approximately 59% of other job settings always or usually use written feedback.

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Table 18

A Comparison of Job Setting on the Use of Written Feedback on the Athletic Training Student's

Progress During Their Clinical Experience

Job Setting	Always	Usually	Sometimes	Rarely	Do Not Use
College/ University	44.0% (44)	24.0% (24)	29.0% (29)	3.0% (3)	0.0
Other	31.3% (10)	28.1% (9)	28.1% (9)	12.5% (4)	0.0

Note. p >.05.

Tables 19 and 20 present the analysis of verbal feedback compared with the independent

variables. Table 19 shows there was no significant differences between the use of verbal

feedback and years of experience as an ATC (p = .770). Both groups had a positive perception

of using verbal feedback.

Table 19

A Comparison of the Use of Verbal Feedback to the Athletic Training Students During Their

Clinical Experience According to Years as an Athletic Trainer

Years	Always	Usually	Sometimes	Rarely	Do Not Use
1 – 10	79.2% (61)	19.5% (15)	1.3% (1)	0.0	0.0
11 or more	83.3% (45)	14.8% (8)	1.9% (1)	0.0	0.0

Note. p >.05.

Table 20 shows a comparison of male and female athletic trainers' perception of providing verbal feedback. There were no significant differences between the use of verbal feedback and gender (p = .345). Both groups had a high percentage of using verbal feedback.

Table 20

A Comparison of Male and Female Use of Verbal Feedback to the Athletic Training Students During Their Clinical Experience

Gender	Always	Usually	Sometimes	Rarely	Do Not Use
Males	78.8% (52)	18.2% (12)	3.0% (2)	0.0	0.0
Females	83.3% (55)	16.7% (11)	.0% (0)	0.0	0.0

Note. p >.05.

Table 21 shows the length of time as a clinical instructor and providing verbal feedback to ATSs in the clinical setting. There were no significant differences between the use of verbal feedback and length of time as a clinical instructor (p = .793). Both groups reported a positive perception of using verbal feedback in the clinical setting.

Table 21

A Comparison of the Length of Time as a Clinical Instructor and the Use of Verbal Feedback to the Athletic Training Students During Their Clinical Experience

Years	Always	Usually	Sometimes	Rarely	Do Not Use
1 – 10	80.7% (88)	17.4% (19)	1.8% (2)	0.0	0.0
11 or more	83.3% (20)	16.7% (4)	.0% (0)	0.0	0.0

Note. p >.05.

Table 22 shows the comparison of NCAA affiliation and the use of verbal feedback to the ATSs during their clinical experience. There was no significant difference between the use written feedback compared with the NCAA affiliation (p = .908). All groups reported a positive perception of using verbal feedback.

Table 22

A Comparison of the National Collegiate Athletic Association Affiliation and the Use of Verbal Feedback to the Athletic Training Students During Their Clinical Experience

NCAA Affiliation	Always	Usually	Sometimes	Rarely	Do Not Use
Division I	80.0% (48)	18.3% (11)	1.7% (1)	0.0	0.0
Division II	81.8% (24)	15.2% (5)	3.0% (1)	0.0	0.0
Division III	82.8% (24)	17.2% (5)	.0% (0)	0.0	0.0

Note. p >.05.

Table 23 shows a comparison of the use of verbal feedback and job setting. There was no significant difference between the use verbal feedback compared to job setting (p = .711). Both groups had a positive perception of using verbal feedback in the clinical setting.

Table 23

A Comparison of Job Setting to the Use of Verbal Feedback on the Athletic Training Students

During Their Clinical Experience

Job Setting	Always	Usually	Sometimes	Rarely	Do Not Use
College/University	81.0% (81)	17.0% (17)	2.0% (2)	0.0	0.0
Other	81.3% (26)	18.8% (6)	.0% (0)	0.0	0.0

Note. p >.05.

Tables 24 through 28 present the analysis of the use of peer debriefing sessions compared with the independent variables. Table 24 shows there was no significant difference between the use of peer debriefing sessions and years of experience as an ATC (p = .795). However, the ATCs with 1-10 years of experience had a higher negative perception of using peer debriefing sessions. ATCs with 11 or more years of experience were split equally in their perception of using peer debriefing sessions in the clinical setting.

Table 24

A Comparison of the Use of Peer Debriefing Sessions and Years of Experience as a Certified

Athletic Trainer

Years	Always	Usually	Sometimes	Rarely	Do Not Use
1 – 10	9.3% (7)	32.0% (24)	36.0% (27)	14.7% (11)	8.0% (6)
11 or more	13.0% (7)	37.0% (20)	25.9% (14)	14.8% (8)	9.3% (5)

Note. p >.05.

Table 25 shows a comparison of the use of peer debriefing sessions and gender. There were no significant differences between the use of peer debriefing sessions and gender (p = .234). Overall, both groups had a negative perception of using peer debriefing sessions in the clinical setting.

Table 25

A Comparison of Male and Female Use of Peer Debriefing Sessions with the Athletic Training Students During Their Clinical Experience

Gender	Always	Usually	Sometimes	Rarely	Do Not Use
Males	13.6% (9)	34.8% (23)	27.3% (18)	19.7% (13)	4.5% (3)
Females	10.0% (7)	32.8% (21)	34.4% (22)	9.4% (6)	12.5% (8)

Note. p > .05.

Table 26 shows the length of time as a CI and the use of peer debriefing sessions in the clinical setting. There were no significant differences between the use of peer debriefing sessions and length of time as a clinical instructor (p = .344). CIs with 1-10 years of experience have a more negative perception of using peer debriefing sessions compared with those CIs with 11 or more years of experience.

Table 26

A Comparison of the Use of Peer Debriefing Sessions with the Athletic Training Students During

Their Clinical Experience and Length of Time as a Clinical Instructor

Years	Always	Usually	Sometimes	Rarely	Do Not Use
1 – 10	10.3% (11)	34.6% (37)	29.9% (32)	16.8% (18)	8.4% (9)
11 or more	20.8% (5)	29.2% (7)	37.5% (9)	4.2% (1)	8.3% (2)

Note. p >.05.

Table 27 shows the comparison of NCAA affiliation and the use of peer debriefing

sessions with the ATSs during their clinical experience. There was no significant difference

between the use peer debriefing sessions compared with the NCAA affiliation (p = .176).

Although there was no significant difference, CIs at Division I (61%) institutions had a more

negative perception of using peer debriefing sessions than those CIs at Division II (49%) and III

(48%) institutions.

Table 27

A Comparison of Peer Debriefing Sessions with the Athletic Training Students During

Their Clinical Experience and National Collegiate Athletic Association Affiliation

NCAA Affiliation	Always	Usually	Sometimes	Rarely	Do Not Use
Division I	6.8% (4)	32.2% (19)	39.0% (23)	13.6% (8)	8.5% (5)
Division II	9.1% (3)	42.4% (14)	27.3% (9)	12.1% (4)	9.1% (3)
Division III	27.6% (8)	24.1% (7)	20 .7% (6)	17.2% (5)	10.3% (3)

Note. p >.05.

Table 28 shows a comparison of the use of peer debriefing sessions with the ATSs and job setting. There was no significant difference between the use of peer debriefing sessions compared to job setting (p = .753). It appears that those CIs affiliated with colleges/universities have a more negative perception than those at other job settings.

Table 28

A Comparison of the Use of Peer Debriefing Sessions with the Athletic Training Students During Their Clinical Experience to Job Setting

Job Setting	Always	Usually	Sometimes	Rarely	Do Not Use
College/ University	10.2% (10)	33.7% (33)	32.7% (32)	14.3% (14)	9.2% (9)
Other	18.8% (6)	31.3% (10)	28.1% (9)	15.6% (5)	6.3% (2)

Note. p >.05.

Tables 29 through 33 present the analysis of the use of summative and formative assessments compared with the independent variables. Table 29 shows there was no significant difference between the use of formative and summative assessments and years of experience as an ATC (p = .855). Overall, more athletic trainers use formative assessments (65.1%) when compared with summative assessments (34.9%) in the clinical setting.

Table 29

The Use of Formative and Summative Assessments Compared with Years of Experience as a

Certified Athletic Trainer

Years	Formative	Summative
1 – 10	64.5% (49)	35.5% (27)
11 or More	66% (35)	34% (18)

Note. p >.05.

Table 30 shows the use of formative and summative assessments and gender. There were

no significant differences between the use of formative and summative assessments and gender

(p = .580). Both male and female ATCs used formative assessments more often than summative

assessments in the clinical setting.

Table 30

The Use of Formative and Summative Assessments Compared with Gender

Gender	Formative	Summative
Males	63.1% (41)	36.9% (24)
Females	67.7% (44)	32.3% (21)

Note. p >.05.

Table 31 shows the length of time as a clinical instructor and the use of formative and

summative assessments in the clinical setting. There were no significant differences between the

use of formative and summative assessments and length of time as a clinical instructor (p =

76

.404). Overall, CIs used formative assessments (65.6%) more often than summative assessments (34.4%).

Table 31

The Use of Formative and Summative Assessments Compared with Length of Time as a Clinical Instructor

Years	Formative	Summative
1 – 10	67.3% (49)	32.7% (35)
11 or More	58.3% (35)	41.7% (10)

Note. p >.05.

Table 32 shows the comparison of NCAA affiliation and the use of formative or summative assessments. There was no significant difference between the use formative or summative assessments compared with the NCAA affiliation (p = .693). Overall, all NCAA divisions used formative assessments (66.6%) more often than summative assessments (33.3%).

Table 32

The Use of Formative and Summative Assessments Compared with National Collegiate Athletic Association Affiliation

NCAA Affiliation	Formative	Summative
Division I	65.0% (39)	35.0% (21)
Division II	62.5% (20)	37.5% (12)
Division III	72.4% (25)	27.6% (8)

Note. p >.05.

Table 33 shows a comparison of the use of formative or summative assessments and job setting. There was no significant difference between the use of peer debriefing sessions compared to job setting (p = .693). Overall, CIs in both the college/university setting and other used formative assessments (65%) more often than summative assessments (35%).

Table 33

The Use of Formative and Summative Assessments Compared with Job Setting

Job Setting	Formative	Summative
College/University	66.3% (65)	33.7% (33)
Other	62.5% (20)	37.5% (12)

Note. p >.05.

Data Analysis—Question 2

The second research question in this study asked if CIs felt affective behaviors were an important aspect in the clinical education of an athletic training student. To analyze this question, section two of the survey contained 20 Likert scaled statements. The statements were coded as either cognitive or affective questions. The cognitive and affective statements were then summed separately to form two different dependent variables. The cognitive statement score had a range from a high of 40 to a low of 8; the affective statements had a range from a high of 60 to a low of 12.

To increase the statistical power of the analysis, the independent variables of years as an ATC, years as a CI, and job setting were coded into two different categories (see Tables 2, 5, and 8). Independent t-tests were used to determine if there was a difference between the independent variables of years as an ATC, gender, years as a CI, and job setting. A one way

analysis of variance (ANOVA) was used to identify if there was a significant difference between the dependent variables and the three-level independent variable NCAA affiliation.

Summed Affective Statements

Table 34 presents the mean scores of athletic trainers according to years of service. Athletic trainers with 11 or more years of experience had significantly more positive scores than ATCs with 1-10 years of experience. Although both groups differed statistically, both groups had positive attitudes toward using affective strategies.

Table 34

A Comparison of Summed Means of Affective Statements versus Years as a Certified Athletic Trainer

Years	N	Mean	df	p-value (2-sided)
1 – 10 Years	76	49.55	122	.009
11 or More Years	48	52.8		

Table 35 shows that female athletic trainers differed significantly from male athletic trainers regarding the use of affective strategies. Both males and females had positive attitudes toward using affective strategies.

Table 35

A Comparison of Summed Means of Affective Statements versus Gender

Gender	N	Mean	df	p-value (2-sided)
Males	61	48.44	122	.000
Females	63	52.89		

T-Tests were conducted with the summed means of affective statements and the remaining two independent variables. The results did not show significantly different attitudes between length of time as a clinical instructor (p = .070) or job setting (p = .865) when compared to the summed affective statements.

A one-way ANOVA was used to examine the independent variable, NCAA affiliation to the summed affective statements. The results indicated the two did not differ significantly (p = .139).

Summed Cognitive Statements

The following data represents the summed cognitive statements compared with the independent variables. Table 36 shows that females had significantly higher scores than males, however, it should be noted that both groups had positive attitude scores regarding the importance of understanding cognitive behaviors in the clinical setting.

Table 36

A Comparison of Summed Means of Cognitive Statements versus Gender

Gender	N	Mean	df	p-value (2-tailed)
Males	65	32.97	129	.011
Females	66	34.79		

T-Tests were used to analyze the summed dependent variable of cognitive statements and no

significant differences were found among the remaining independent variables of years of

experience as an ATC (p = .150), length of time as a clinical instructor (p = .070), and job setting

(p = .231). All groups had positive attitudes regarding the importance of using cognitive

behaviors in the clinical setting.

Table 37 shows that NCAA divisions are very similar in their attitude toward cognitive

behaviors in the clinical setting. The ANOVA showed a small statistical significant difference

between the dependent variable cognitive statements versus NCAA affiliation (p = .047). The

Tukey post hoc testing revealed no significant difference between groups even though the

ANOVA did report a small, statistically significant finding. To determine the cause of this data

discrepancy, a box plot was performed to determine the presence of potential outliers. The box

plot revealed a clear outlier for the data on line 146 as reported in SPSS. Because the outlier had

a reported low score of 12, the outlier was removed to keep the data consistent. Table 38 shows

the ANOVA test with the absence of the outlier and there was no statistical difference between

the dependent variable of summed cognitive statements when compared with the independent

variable of NCAA division affiliation (p = .073).

Table 37

A Comparison of Summed Means of Cognitive Statements versus National Collegiate Athletic

Association Divisions—Outlier Included

| | | | 95% Confidence Interval for Mean | |
| | | | | |
Division	N	Mean (SD)	Lower Bond	Upper Bond
Division I	59	32.92 (4.4)	31.76	34.07
Division II	33	34.67 (4.0)	33.25	36.09
Division III	29	34.93 (4.2)	33.53	36.34

Note. p <.05.

Table 38

A Comparison of Summed Means of Cognitive Statements versus National Collegiate Athletic

Association Divisions—Outlier Excluded

| | | | 95% Confidence Interval for Mean | |
| | | | | |
Division	N	Mean (SD)	Lower Bond	Upper Bond
Division I	58	33.35 (2.96)	32.57	34.12
Division II	33	34.67 (4.0)	33.25	36.09
Division III	29	34.93 (3.7)	33.53	36.34

Note. p >.05.

Professional Values Ranking

The next section of the survey included a list of characteristics that identified 10 different

professional values. Table 39 shows the mean ranking of each professional value. The top five

in rank order from most important professional value to least important professional value were ethical behavior, truth/honesty, evaluation of clinical findings to establish accurate assessments, practicing in a competent manner and integrity. Three of these values were considered affective values while two were considered cognitive values. Overall, the top five most ranked values were ethical behavior (N = 116), practicing in a competent manner (N = 106), evaluation of clinical findings to establish accurate assessments (N = 97), integrity (N = 81), and a tie between truth/honesty (N = 76) and use of evidence-based practices for delivery of care to patients (N = 76). Of these professional values, three were affective values and three were cognitive values.

The least important professional values were use of evidence-based practices for delivery of care, respect, empathy, maintaining accurate documentation, and promoting the athletic training profession. Of these least important values, three values were affective values and two values were cognitive. The least often ranked values were empathy (N = 35) and promoting the athletic training profession (N = 25), both were affective values. The most often ranked values were ethical behavior (N = 116) and practicing in a competent manner (N = 106). In this case, ethical behavior is considered an affective value and practicing in a competent manner is considered a cognitive behavior.

It would seem in all cases that there was an equal balance between the ranking of affective values and cognitive values.

Table 39

Professional Values Ranking

Professional Value	N	Mean Rank (SD)
Ethical Behavior	116	2.38 (1.437)
Truth/Honesty	76	2.39 (1.244)
Evaluation Clinical Findings to Establish Accurate Assessments	97	2.90 (1.440)
Practicing in a Competent Manner	106	3.04 (1.454)
Integrity	81	3.09 (1.551)
Use of Evidence-Based Practices for Delivery of Care to Patients	76	3.22 (1.323)
Respect	62	3.48 (1.501)
Empathy	35	4.00 (1.393)
Maintaining Accurate Documentation	53	4.06 (1.537)
Promoting the Athletic Training Profession	25	4.56 (1.660)

Data Analysis—Question 3

The final section of the survey presented two scenarios. Eight Likert scaled statements then followed each scenario that identified CIs' attitudes toward affective behaviors and the perception of the opportunities ATSs are given to practice affective behaviors in a clinical setting. Each set of statements contained four affective statements and four cognitive statements. T-tests were used to analyze the independent variables of years as an ATC, gender, length of time as a clinical instructor, and job setting. A one-way analysis of variance was used to analyze the independent variable NCAA division affiliation because it was a three level variable.

Summed Cognitive Statements

Table 40 compared male and female perceptions to the summed cognitive athletic

training behaviors. The summed Likert cognitive statements had a possible high score of 40 and

a low score of 8. Both males (M = 34.12) and females (M = 35.77) had positive differed

significantly, however, such differences were so minor as to be ignored. Although females had a

significantly higher perception of the importance of cognitive behaviors in athletic training

students, both groups had a high perception of the importance of cognitive statements for each

scenario question.

Table 40

A Comparison of Scenario Questions Summed Means of Cognitive Statements versus Gender

Gender	N	Mean	df	p-value (2-tailed)
Males	65	34.12	127	p = .033
Females	64	35.77		

Note. p >.05.

 T-Tests were used to analyze the summed dependent variable of cognitive statements

and no significant differences were found among the remaining independent variables of years of

experience as an ATC (p = .787), length of time as a clinical instructor (p = .410), and job setting

(p = .493). All scores were positive.

A one-way ANOVA was used to determine if there was a significant difference between

the dependent variable of summed cognitive scores and the independent variable of NCAA

affiliation. The ANOVA did not show any significant difference between NCAA division I, II,

or III institutions. All participants had positive perceptions of the importance of using cognitive

behaviors in the clinical setting (p = .126).

Summed Affective Statements

Table 41 presents the results of the summed affective statement scores compared with

gender. The summed affective Likert statements had a possible high score of 40 and a low score

of 8. Although males and females differed significantly, both groups had positive perceptions of

the importance of using affective behaviors in the clinical setting.

Table 41

A Comparison of Scenario Questions Summed Means of Affective Statements versus Gender

Gender	N	Mean	df	p-value (2-tailed)
Males	65	34.28	128	p = .036
Females	65	35.91		

Note. p >.05.

T-Tests were used to analyze the summed dependent variable of cognitive statements and

no significant differences were found among the remaining independent variables of years of

experience as an ATC (p = .542), length of time as a clinical instructor (p = .637), and job setting

(p = .648).   All scores were positive.

A one-way ANOVA was used to determine if there was a significant difference between

the dependent variable of summed affective scores and the independent variable of NCAA

affiliation. The ANOVA did not show any significant difference between NCAA Division I,

Division II or III institutions and the perception of the importance of affective behaviors (p =

.189).

Summary

The research performed in this study was intended to identify the strength of perceptions of CIs' feedback techniques and the perception of the importance of affective behaviors in ATSs. The results obtained through this research indicate that athletic training CIs have a positive perception and attitude with regard to affective behavior in clinical education. Although there were significant findings in this research, no significant difference indicated a less than positive perception of affective behaviors.

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Chapter V

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

In athletic training the term "professional behaviors" are meant to serve as an all encompassing definition for the affective domain. There is limited research and no clear guidelines for implementing affective behaviors in the clinical setting. Professions such as physical therapy, nursing, and medical educational programs have outlined specific affective guidelines and milestones that students should be able to apply in a clinical setting. This dissertation explored the athletic training clinical instructors' (CIs) perception of affective behaviors in clinical education. Chi-Square, independent T-tests, and Analysis of Variance were used to analyze the survey results.

Summary of Findings

Research Question 1

What types of feedback do CIs use most often in the clinical experience to develop and evaluate affective behaviors in the clinical setting? Do years of experience as an athletic trainer, gender, years as a clinical instructor, National Collegiate Athletic Association (NCAA) affiliation and job setting matter?

The use of real-life examples as a way to foster discussion with athletic training students (ATSs) produced some statistical differences however; all groups had positive perceptions of affective strategies as a way to develop affective behaviors. Likewise, the use of written feedback produced some significant differences but it must be noted that all groups had a positive perception of using real-life examples or written feedback methods in the clinical setting to update the ATSs on their progress. The use of peer debriefing sessions did not produce any

significant differences among groups; however, it was the least used method for providing

feedback to the ATSs when compared with real-life examples, written feedback, verbal feedback

and formative or summative assessments.

Research Question 2

Do CIs feel affective behaviors are an important aspect in the clinical education of an

athletic training student?

To determine the answer for this question, the survey contained cognitive and affective

statements. The statements were then summed to produce two dependent variables. Although

there were significant differences between groups, it should be noted that all groups had a

positive perception of using affective and cognitive behaviors in the athletic training clinical

setting.

The survey also attempted to identify the perception of the importance of affective

professional values in the clinical setting. CIs were given 10 different professional values and

asked to rank them in order of perceived most important to least important value. Of the ranked

behaviors, it would appear that both cognitive and affective behaviors were equally represented

by the respondents.

Research Question 3

How important do CIs perceive the practice of affective behaviors by athletic training

students in the clinical setting?

To answer this research question two scenarios were developed to determine how

important CIs felt affective behaviors were during the application of skills in a clinical setting.

Cognitive and affective statements then followed each scenario and then the scores were

summed to make two different dependent variables. While there were some statistical

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differences, all groups had a positive perception of the use of affective behaviors in the practical application of athletic training skills in the clinical setting.

Discussion

There are six conclusions that can be drawn from the results of this study. This survey provided six different types of feedback techniques: real-life examples, written and verbal feedback, peer debriefing and the use of summative or formative feedback in the clinical settings. With the exception of the use of peer debriefing sessions with ATSs, the results from this study indicate that CIs felt all types of feedback were important to the clinical education of ATSs.

The use of and positive perceptions of various feedback techniques are consistent with those found in the literature. Mensch and Ennis (2002) stated that students believed they had more meaningful experiences in their clinical education if real-life examples were incorporated into their educational experiences. The use of well developed real-life examples aids the students in the decision-making process after they are professionals in their field (Vallevand, Paskevich, & Sutter, 2005). Other benefits to using real-life examples allows students to vocalize ethical concerns, promote self evaluation, and elicit reflection and feedback for the students which all contribute to learning professional values and affective behaviors in the clinical setting (Lisko & O'Dell, 2010).

Second, this study indicated that CIs always or usually use verbal feedback more often than written feedback in the clinical setting but both methods were perceived to be an important way to provide feedback to ATSs. Most CIs preferred giving verbal feedback rather than written feedback to students in a clinical setting. This finding is not surprising since verbal feedback is often the easiest and least time consuming way to provide feedback. However, in medical schools, both verbal and written feedback in the clinical setting has been shown to be important

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in medical education (Salerno, Jackson, & O'Malley, 2003). Using written feedback and verbal feedback was shown to be an important tool for CIs to produce affective behaviors in athletic training students. Salerno et al., (2003) found that specific feedback when linked to specific events were the most helpful for medical students.

It would seem from the research, that CIs should be encouraged to increase the amount of written feedback they give their students. Written feedback can increase affective behaviors and also help the ATSs develop those behaviors through reflection practices (Emmerson, et al., 2011). CIs can also benefit from written feedback by being able to monitor their questioning skills and learning to accommodate different level learners (Emmerson, et al., 2011).

Third, the study indicated that more certified athletic trainers (ATCs) use formative feedback when compared with summative feedback and given the fact that CIs indicated a positive perception of the importance of written feedback, this is not surprising. Formative feedback has been identified in the literature as being more important than summative feedback in shaping professionalism in students. Elliot et al., (2009) describe formative feedback as providing "coaching" to the student when compared with summative evaluations. Having formative assessments with the ATSs can consistently reinforce the professional values and promoting affective behaviors. Laurent (2010) developed a resource for athletic training CIs to guide them in ways to provide meaningful feedback to their students to highlight specific techniques in order to assess affective behaviors. By using these verbal, written, and formative feedback techniques CIs can continue to develop the professional roles of the ATSs and develop affective behaviors.

Fourth, although the use of peer debriefing sessions did not produce any significant findings when compared with the independent variables, the amount of ATCs who sometimes,

rarely or did not use peer debriefing sessions was greater than those ATCs who reported always or usually using these debriefing sessions. Peer assisted learning (PAL) is identified as peer tutoring, peer modeling, peer education, peer counseling, peer monitoring, and peer assessment (Henning, Weidner, & Jones, 2006). PAL also allows the student to be aware of their own skill level when they evaluate their peers. According to Henning and Marty (2008), peer assessment incorporates learning over time into the athletic training curriculum which allows for "practice and internalization, and subsequent reevaluation in a real or simulated patient setting" (p. 30). This model develops confidence, critical thinking skills, and decision making through reflection and feedback which aids in the development of affective behaviors. CIs should consider peer debriefing sessions as an important tool to help develop affective behaviors in the clinical setting.

Fifth, this study showed that CIs feel professionalism and affective behaviors are a positive and important aspect of the clinical education of the student. In the health profession, these affective behaviors have been described using the term professionalism, professional values, or core professional values. Determining the importance of affective behaviors and professional values in the clinical setting has been identified in physical therapy (American Physical Therapy Association, n.d.; Ernstzen, Bitzer, & Grimmer-Somers, 2009; Hayes et al., 1999; Sellheim, 2006) and medical (ABIM, 2002; Jha et al., 2006; Jha et al., 2007; Lesser et al., 2011) literature.

Using professional values that are identifiable and assessed by the CI can greatly help the ATS grow and mature into their role as a professional. Peer and Schlabach (2009) indicated that students found "professional values were either important or extremely important (p. 36). By incorporating professional values into the classroom and clinical instruction, athletic training

students can begin to become better leaders and to be more involved in their professional organization. Even though professional values in the athletic training have not been explicitly expressed, it is clear that CIs have professional values they feel are more important than others. CIs play a key role modeling these professional behaviors in the clinical setting that can affect the future professional success of the ATS.

Finally, CIs participating in this study indicated that affective behaviors were an important aspect in the practical application of ATSs skills. Since CIs felt strongly there was an importance for displaying affective behaviors in the clinical setting, it is no surprise they also reported an importance for promoting affective behaviors in the clinical setting. Often, using affective behaviors in the clinical setting goes beyond the competency of the medical professional but is about being compassionate, respectful, having empathy, and being trustworthy. In scenario situations, CIs felt it was just as important to practice affective behaviors as it was to practice cognitive behaviors.

Recommendations for Future Research

The results from this study indicate that this is a topic for further study. Several recommendations for future research are elucidated:

1. The results from this study indicate that CIs have a positive perception of affective behaviors. Future research should examine the ATSs' perception of the importance of affective behaviors. The ATSs' perceptions could then be correlated with the CIs' perceptions to see if the perceptions of importance are similar.

2. This instrument should be further validated through future research. Given the consistently positive perceptions of CIs toward affective behaviors in various contexts; this survey may need to be revised.

3. The ability of CIs to instruct, to assess, and evaluate affective behaviors in athletic training holds promise for further research. Future researchers may want to consider a qualitative design to investigate affective behavior transference in the clinical setting. Researcher observations and/or video evidence of clinical instructor/student interactions could prove a useful tool for identifying instructional techniques and assessment techniques.

4. Upon completion of the survey, there seemed to be a large percentage of athletic trainers who were not represented in this study. An overwhelming majority of the sample population who responded to this study was from the collegiate setting. The second highest groupings were athletic trainers employed in the clinic or outreach setting. This disparity is most likely due to the fact that there is no database kept for CIs thereby making contact for each CI very difficult. Manual searches identify university CIs but the ATEP may not always list off-site CIs. A more diverse population may change the results of this study and should be investigated further.

5. Future research may want to look at utilizing different groupings for the independent variables such as age, educational background, or educational institution where they received their degree. Identifying groups in a different manner may affect the results of the study.

Conclusion

In conclusion, athletic training CIs have a positive perception of the importance of affective behaviors in clinical education. The evaluation, assessment, and implementation of affective behaviors in the clinical setting should continue to be analyzed and researched to ensure students are gaining the understanding of the importance of this learning domain. Future research should continue to investigate ATSs' perceptions of the importance of affective behaviors and its role in clinical education.

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APPENDICES

Survey Instrument Design Matrix

	Affective Behavior	Professionalism	Professional Values	Instructional/ Pedagogical Strategies	Moral/ Ethical Decision Making	Learning Styles
ABIM, 2002		X	X			
APTA, n.d.	X		X			
Campbell, E.G., Regan, S., Gruen, R.L., Ferris, T.G., Rao, R.S., Cleary, P.D. & Blumenthal, D., 2007	X	X	X		X	
Caswell, S.V., 2003		X			X	
Ernstzen, D.V., Bitzer, E. & Grimmer-Somers, K. 2009		X		X		
Gardiner, A & Mensch, J.M., 2004			X			

	Affective Behavior	Professionalism	Professional Values	Instructional/ Pedagogical Strategies	Moral/ Ethical Decision Making	Learning Styles
Heinerichs, S & Curtis, N., 2006				X		
Jha, V., Bekker, H.L., Duffy, S.R.G. & Roberts, T.E., 2006		X				
Jha. V., Bekker, H.L., Duffy, S.R.G & Roberts, T.E., 2007		X	X	X		
Krathwohl, D.R., Bloom, B.S., & Masia, B.B., 1964	X			X		
Lacasse, M., Lee, S., Ghavam-Rassoul, A. & Batty, H.P., 2009				X		
Lesser, C.S., Lucey, C.R., Egener, B., Braddock C.H., Linas, S.L. & Levinson, W., 2010	X	X				

	Affective Behavior	Professionalism	Professional Values	Instructional/ Pedagogical Strategies	Moral/ Ethical Decision Making	Learning Styles
Lisko, S. & O'Dell, V., 2010				X		X
Miettinen, O.S. & Flegel, K.M, 2003		X				
Murphy, E.J., 2007	X			X		X
NATA, 2006	X	X	X		X	
Peer, K.M & Schlabach, G.A., 2009			X			
Phillips, J.M & Vinten, S.A., 2010				X		
Ristori, C.A., Eberman, L.E., Tripp, B.L. & Kaminski, T.W., 2011						X
Scifer, J. & Manners, J., 2005	X					
Spence Laschinger, H.K., 1990						X
Thompson, M.F., 2007	X	X	X			
Waldner, M.H. & Olson, J.K., 2007				X		X

	Affective Behavior	Professionalism	Professional Values	Instructional/ Pedagogical Strategies	Moral/ Ethical Decision Making	Learning Styles
Weddle, M.L. & Sellheim, D.O., 2009				X		X
Weidner, T.G. & Henning, J.M., 2002		X	X			
Wolff-Burke, M., Ingram, D., Lewis, K., Odom, C. & Donegan Shoaf, L., 2007		X	X			

APPENDIX B

Clinical Instructors' Perceptions of Affective Behavior Survey

The following questions are designed to identify ways you provide feedback to athletic training students (ATSs) in a clinical setting.

1. I use real-life examples with the students in the clinical setting in order to foster discussion of best patient care with my ATSs.

          Always   Usually   Sometimes   Rarely   Do Not Use

2. I provide written feedback on the ATS's progress during their clinical experience.

          Always   Usually   Sometimes   Rarely   Do Not Use

3. I provide verbal feedback to the ATS's during their clinical experience.

          Always   Usually   Sometimes   Rarely   Do Not Use

4. I conduct peer debriefing sessions.

          Always   Usually   Sometimes   Rarely   Do Not Use

5. In the clinical setting do you use formative assessments or summative assessments more often? Ex. Formative assessments include observations, short quizzes and reflective journals throughout the clinical rotation whereas a summative assessment are more cumulative in nature and is a test administered after the clinical rotation is over.

   1. Formative Assessments

   2. Summative Assessments

This section of the survey is designed to identify clinical instructors' perceptions of the importance of cognitive and affective behaviors in athletic training students. This section is also meant to help identify clinical instructors' perceptions of the amount of opportunities athletic training students are given to practice affective behaviors in the clinical setting.

SD – Strongly disagree

D- Disagree

U- Uncertain

A-Agree

SA-Strongly Agree

1. I link theory learned from the classroom to the application of the skills in the clinic.

   SD   D   U   A   SA

2. I use evidence-based clinical practice during the clinical experience.

   SD   D   U   A   SA

3. I demonstrate to the ATSs specific procedures for documenting injuries.

   SD   D   U   A   SA

4. I have an in-service training with ATSs concerning standard operating procedures for working in an athletic training room.

   SD   D   U   A   SA

5. I provide students with specific expectations of professional conduct during the ATSs clinical rotations.

   SD   D   U   A   SA

6. I encourage ATSs to engage in advanced clinical reasoning skills during their clinical rotations. An example would be: You ask the ATSs to describe a therapeutic modality treatment to use on a swollen ankle. Instead of asking why the athletic training student selected the modality you ask the athletic training student to explain the intended physiological effects to the injury based on the modality picked by the students.

   SD   D   U   A   SA

7. I provide ATSs with the opportunity to practice patient assessments by using patient simulations.

      SD   D   U   A   SA

8. I allow ATSs the opportunity to develop a trusting relationship with the coaching staff when reporting injuries

      SD   D   U   A   SA

9. I advocate becoming an active participant in your state athletic training organization

      SD   D   U   A   SA

10. I advise ATSs to reflect on their clinical skills during their clinical experience

      SD   D   U   A   SA

11. I promote an ethical behavior in the clinical setting

      SD   D   U   A   SA

12. I make sure ATSs understand psychological issues that could be affecting the patient's outcomes.

      SD   D   U   A   SA

13. I demonstrate to the ATSs the appropriate conversations to have with patients when explaining an injury and post treatment care.

      SD   D   U   A   SA

14. I try to help the ATSs to understand the importance of empathy in the clinical setting

      SD   D   U   A   SA

15. I encourage ATSs to join the national organization

SD   D   U   A   SA

16. I encourage ATSs to read relevant research and scholarship within the athletic training

  profession

    SD   D   U   A   SA

17. I encourage evidence-based clinical practices by attending continuing education

  conferences/symposiums, etc.

    SD   D   U   A   SA

18. I promote our profession by encouraging involvement in athletic training organizations

    SD   D   U   A   SA

19. I make sure the ATSs aware of the importance of abiding by the BOC Standards of

  Practice

    SD   D   U   A   SA

20. I communicate the importance of effective practices for documenting injuries and

  illnesses of a patient

    SD   D   U   A   SA

This question is designed to identify a list of core values clinical instructors think are the most important

Please rank the top 3 professional values that all athletic trainers must have.

Truth/honesty

Ethical Behavior

Use of evidence-based practice for delivery of care

Empathy

Evaluation of clinical findings to establish accurate assessment

Maintaining accurate documentation

Integrity

Respect

Promoting the athletic training profession

Practicing in a competent manner

ATHLETIC TRAINING SCENARIOS

This section of the survey is intended to identify clinical instructors' attitudes toward affective behaviors and also their perceptions of the opportunities athletic training students are given to practice affective behaviors.

Listed below are 5 different scenarios that present a group of behaviors that encompass the cognitive and affective domains of learning. Please read each scenario and identify your perception of the importance for each behavior.

1. During a college soccer practice, Kelsey, a female sophomore midfielder falls to the ground with what appears to be a knee injury. She is removed from the field and evaluated on the sideline. After the senior athletic training student (ATS) finishes the knee evaluation, the ATS concludes that the female soccer player has a suspected ACL tear. Kelsey has never been seriously injured before and is visibly distraught over this

injury. She repeatedly states that she doesn't know what she's going to do if she can't play soccer.

    a. The ATS should perform a more thorough examination off the sideline to evaluate the extent of the injury

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

    b. The ATS should reflect on his evaluation to determine how he could have improved his technique after the evaluation is completed

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

    c. The ATS should develop a detailed plan of care for the athlete

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

    d. The ATS should communicate empathy and understanding to the athlete

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

    e. The ATS should obtain a medical history

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

    f. The ATS should be able to communicate an explanation of the injury and implications the injury has on participation to the athlete so she can understand the extent of the injury while she was in the athletic training room

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

    g. The ATS should use evidence-based practices to determine the best care for this athlete.

___Very Unimportant ____Unimportant   ____Important   ____Very Important

h. During the meeting, you make a determination that the ATS should understand the importance of documenting injuries in a litigious society

___Very Unimportant ____ Important   ____Unimportant   ____Very Important

2. You were made aware that in the spring semester, Joe, a college football player received a concussion during spring practice. Throughout the summer, he has been diagnosed with post-concussion syndrome. The athlete has received neurocognitive testing in the summer due to the ongoing symptoms but has not been given any evaluative results from this test. He is still experiencing symptoms but he has not followed-up with the physician and it is now preseason. Joe has had 5 previous concussions and is anxious because he may not be able to play football this season.

   a. The ATS should understand the scope of practice of a variety of other health care professions

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

   b. The ATS should recognize the legal implications of proper management of care based on evidence-base practices

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

   c. The ATS should understand the necessity to perform post-injury neurocognitive assessment with this athlete

____Very Unimportant   ____ Unimportant   ____Important   ____Very Important

   d. The ATS should understand what decision should be made for return-to-play based on concussion protocol criteria

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

        e. The ATS should recognize the need for further referral for this athlete

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

        f. The ATS should have the knowledge to be able to provide an explanation of the

           potential long-term effects from the injury to the athlete and/or parents prior to

           referring him to a qualified medical physician.

___Very Unimportant ____ Unimportant   ____Important   ____Very Important

        g. The ATS should be able to make a plan of care based on evidence-based practices

___Very Unimportant ____ Important   ____Unimportant   ____Very Important

        h. The ATS should be aware of the integral role documentation plays in the part of

           the professional expectations of an athletic trainer

___Very Unimportant ____ Important   ____Unimportant   ____Very Important

Demographic Information

1. How long have you been a certified Athletic Trainer?
   a. 1-10 years
   b. 11-20 years
   c. More than 20 years
2. What is your gender?
   a. Male
   b. Female
3. How long have you been a clinical instructor?
   a. 1-10 years
   b. 11-20 years
   c. More than 20 years

4. What NCAA Division does your institution support?
   a. Division I
   b. Division II
   c. Division III
5. What is your current job setting?
   a. College/University
   b. High School
   c. Clinic/Outreach
   d. Physician Extender
   e. Industrial
   f. Other – please specify