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ATEP Directors' and Atcs' Perceptions of the Psychosocial Intervention and Referral Competencies

Brian D. Seiler

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(Under the Direction of Noah Gentner)

ABSTRACT

Recent data clearly indicates that Certified Athletic Trainers (ATC) desire and may benefit from additional sport psychology training. It has been posited that psychological rehabilitation is just as, if not more, important than the physical rehabilitation process (Wiese, Weiss & Yukelson, 1991). Stiller-Ostrowski and Ostrowski (2008) support this by stating that psychosocial aspects of rehabilitation have been identified as an area of focus due to ATCs feeling underprepared. The current study was designed to extend from previous research by examining Athletic Training Education Program (ATEP) directors' and ATCs' perceptions of the Psychosocial Intervention and Referral competencies. Specifically, both groups will rate the Psychosocial Intervention and Referral competencies on importance, criticality, and preparedness, as well as rank the NATA Educational Competencies on these same variables. Participants included 88 randomly selected ATCs and 53 undergraduate ATEP directors from both genders, all race/ethnicity groups, and all NATA districts (geographic regions). Both groups completed the Athletic Training Educational Competency Questionnaire (ATECQ) online at http://www.surveymonkey.com. After a 5-week data collection time period, results were analyzed using one-tailed independent T-tests with an alpha level of 0.01 and an effect size of 0.50. Significant results were not found within the importance, criticality, or preparedness variables. However, it was noted that ATEP directors reported two psychosocial competencies to be more important compared to ATCs. In addition,

ATCs and ATEP directors ranked the importance, criticality, and preparedness factors of the Psychosocial Intervention and Referral content area below 50% of the other content areas. Moreover, both groups ranked the acute care of injuries and illnesses, orthopedic clinical examination and diagnosis, and risk management and injury prevention as the most important, critical, and prepared. Overall, ATCs and ATEP directors do not consider the psychosocial aspects in athletic training as important or critical as the other content areas. Therefore, it is less likely that time is spent preparing students in this area. It is suggested that educational opportunities need to be made more available to ATCs and ATEP directors. More importantly, complete rehabilitation of the athlete will not occur until ATCs begin to treat the psychological aspects of injury.

INDEX WORDS: ATC, Psychosocial Intervention, ATEP Director, Athletic Training Education

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DEDICATION

This thesis is dedicated to…

My family David, Lynn, and Leslie Seiler, thank you for all of your love and support throughout my life. You are always there to guide me and push me to be a better individual. You all have made me the person I am today. I would also like to dedicate this to my late Grandfather and Grandmother Kengierski. I will cherish our many great memories; you both are missed very much.

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CHAPTER 1

INTRODUCTION

History of Athletic Training Education

The evolution of athletic training education in the United States (U.S.) has been strongly influenced by the history and development of the National Athletic Trainers' Association (NATA). The NATA was formalized in the 1950s (Delforge & Behnke, 1999) in an attempt to facilitate the reputation and professionalism of athletic training. This organization was founded with the intention to "build and strengthen the profession of athletic training through the exchange of ideas, knowledge, and methods of athletic training" (O'Shea, 1990, pg. 53). Shortly after the NATA was founded athletic training education and certification were formalized and an initial curriculum model was approved by the NATA in 1959.

It was not until 1969 that the NATA recognized the first official undergraduate programs in athletic training. A definition was established shortly after to describe athletic training as an undergraduate program:

> A course of study in athletic training which is at least equivalent to the minimum number of semester/quarter hours which constitutes a major in the educational unit in which the Athletic Training Education Program (ATEP) is housed. The ATEP must also be designed so that students are provided with adequate opportunity to meet NATA behavioral objectives. (Delforge, 1982, pg. 55)

In an effort to further the process of program evaluation, a national certification examination was developed in the late 1960s and was administered for the first time in 1970 (Newell, 1984; Westphalen & McLean, 1978).

Throughout the 1970s there was a steady increase in the number of athletic training programs available at colleges and universities, most of which followed the 1959 curriculum model with only minor improvements. Eventually, a revised universal athletic training

curriculum was established in the mid-1970s producing a common body of knowledge for all Certified Athletic Trainers (ATC). This prompted the NATA to form the *Competencies in Athletic Training* (Delforge & Behnke, 1999). This publication was used as a "guide to administrative, academic, and clinical program personnel when structuring the didactic and clinical education experience for students" (NATA, 2006, pg. 1). The competencies in this manual represent the minimum requirements for a student's entry-level athletic training education. One must remember that it is the duty of individual ATEPs to exceed these minimum requirements as they structure their individual program curriculum.

To further aid in the establishment of athletic training programs, the 1983 *Guidelines for Development and Implementation of NATA Approved Undergraduate ATEPs* incorporated specific requirements to the major as a whole. Due to this push toward specific subject matter requirements, the *Competencies in Athletic Training* manual was first developed in 1983. This publication contains the "standards for development of undergraduate programs as academic majors in athletic training" (NATA, 1983; Delforge & Behnke, 1999, pg. 58). This manual replaced the previously established behavioral objectives and was based on "performance domains" that were identified in the first athletic training Board of Certification (BOC) Role Delineation Study.

In 1990, athletic training was formally recognized by the American Medical Association (AMA) as an allied health profession (NATA, 1990). This distinction was necessary in order for athletic training to be formally recognized for education program accreditation by the American Medical Association-Committee on Allied Health Education and Accreditation (AMA-CAHEA). Shortly thereafter, the AMA-CAHEA was removed and the Commission on Accreditation of Allied Health Education Programs (CAAHEP) became the national accrediting body of athletic

training. At this time, completing a CAAHEP-accredited entry-level program became the only way to receive the NATABOC certification. Finally, in June 2006 the Committee on Accreditation of Athletic Training Education (CAATE) was developed to become responsible for the accreditation of all entry-level ATEPs. From this point forward, the athletic training profession and educational curriculums continued to grow. Today, there is a standardized education system that specifies common bodies of knowledge that all ATCs are required to know and be proficient.

History of Athletic Training Clinical Education

Athletic training clinical education was initially developed in the 1970s. A significant portion of ATEPs are based on preparing athletic training students to become proficient in clinical areas through classroom, laboratory, and clinical experiences (NATA-ED, 2002). The clinical education aspect of the curriculum challenges students to apply theoretical information to "real-life" situations with athletes (Jarski, Kulig & Olson, 1990). Beginning in 2004, students were required to be enrolled in accredited ATEPs in order to be eligible to sit for the BOC examination (Stiller-Ostrowski & Ostrowski, 2009). Within these programs ATCs stated that approximately 53% of their entry-level professional development was in the form of clinical education (Laurent & Weidner, 2002). It is suggested that real-time proficiency evaluation is best, but simulated and standardized patient proficiency evaluation is also available (Walker, Weidner, & Armstrong, 2008). It is believed that clinical education will aid in the acquisition, development, and mastery of the listed clinical competencies and proficiencies in the *Athletic Training Educational Competencies* manual (Cheung & Yau, 2002).

To aid in the clinical education experience, the CAAHEP formally adopted the Approved Clinical Instructor (ACI) designation in 2001. This designation allowed ATCs to provide

instruction for athletic training students at their clinical sites. Furthermore, the standards and content guidelines were further revised and the Competencies Committee was formed in 1997. Based on this committee's work, the competencies were expanded from six domains to twelve content areas in the third edition of the *Athletic Training Educational Competencies* manual. These competencies described the "cognitive, psychomotor, and affective requirements through clinical proficiencies in athletic training professional preparation" (Houglum & Weidner, 1999, pg. S-226). The newly established competencies and proficiencies are now the basis of the clinical education of undergraduate athletic training students (Weidner & Henning, 2002).

Athletic Training Educational Competency: Psychosocial Intervention and Referral

Since the first edition of the *Athletic Training Educational Competencies* manual in 1983, undergraduate ATEPs have been solely competency based. These competency-based skills, also referred to as educational competencies and proficiencies, are located in the fourth edition of the *Athletic Training Educational Competencies* manual (NATA, 2006). This publication lists the twelve content areas in which athletic training students must demonstrate proficiency in order to be a minimally competent entry-level athletic trainer (Stiller-Ostrowski & Ostrowski, 2009; Walker, Weidner, & Armstrong, 2008). In this context, proficiency is defined as "performing with expert correctness and facility" (NATA, 2006, pg. 3). These clinical proficiencies are based on the BOC Role Delineation Study areas which athletic training students may encounter in the field of athletic training. However, it appears that not all educational competencies and proficiencies are stressed to the same degree. One area which appears to receive little attention is the Psychosocial Intervention and Referral content area. This area includes "communication skills, motivation and adherence strategies, social support and basic counseling skills (eg.

emotional response to injury), mental skills training (eg. imagery, relaxation), and potential referral situations are emphasized (Stiller-Ostrowski & Ostrowski, 2009, pg. 69).

Currently a course specifically dedicated to psychosocial intervention and referral is not required within the athletic training curriculum. Moreover, several higher educational institutions do not offer a class in this area which allows them to individually decide how they will address the standards established by CAATE and the NATA. Research by Lafferty et al. (2008) illustrated that nearly 82% of surveyed physiotherapists valued the incorporation of sport psychology into their educational curricula. While some ATEPs do have psychological training in their curriculum (Kolt & Anderson, 2004), research suggests that recently certified athletic trainers feel that they lack sufficient strategies to deal with noncompliant and difficult athletes (Stiller-Ostrowski & Ostrowski, 2009). In addition, they also feel underprepared to provide counseling support to athletes, carry out mental skills training, and know when and how to refer athletes to other healthcare professionals (Stiller-Ostrowski & Ostrowski, 2009).

ATCs' Perceptions of the Psychological Issues in Athletic Training

Within athletic training programs, the physical aspects of injury are emphasized because injuries are seen as physical problems (Williams, 2006; Tracey, 2003). During the injury process, it is the ultimate goal of the ATC to physically treat the injury and return the athlete to competition as soon as possible (Wiese, Weiss, & Yukelson, 1991). Nevertheless, most, if not all injuries have both a physical and psychological component. Research has stressed that psychological rehabilitation from injury is, just as, if not more important than the physical rehabilitation process (Wiese, Weiss, & Yukelson, 1991).

Recent research suggests that the psychological aspects of injury greatly influence the injury process (Williams, 2006). A study by Laffterty et al. (2008) revealed that 98% of

physiotherapists felt that athletes were psychologically affected by injury. Of this same sample, 96% of physiotherapists thought it was important to treat the psychological aspects of injury. It was stated by Arvinen-Barrow, Hemmings, Weigand, Becker, & Booth (2007) that psychological effects occur in all stages of the injury process, especially in the rehabilitation phase. While most, if not all sports medicine professionals recognize the importance of treating the psychological factors associated with injury many are reluctant to address this area which could hinder their ability to help the athlete recover (Arvinen-Barrow, Hemmings, Weigand, Becker, & Booth, 2007). Despite their reluctance to address the psychological affects of injury, Kolt (2003) has suggested that sports medicine professionals are best suited to provide psychological assistance to sport injuries for four main reasons: "1) they are usually the primary caretakers who deal with injured athletes on a day-to-day basis; 2) it appears that psychological issues are often discussed in conjunction with physical aspects of rehabilitation; 3) the techniques used in physiotherapy involve touch, which can facilitate athletes to open up to their therapists about psychological issues of their recovery; and 4) existing studies suggest that athletes themselves feel that physiotherapists are in an ideal situation to address the psychological aspects of injury" (pg. 112).

A study completed by Wiese, Weiss, and Yukelson (1991) acknowledged that ATCs are aware of the importance of psychological skills and strategies which can be used during rehabilitation. In addition, it was recognized that these skills and strategies can be best implemented when an ATC and Sport Psychology specialist work together. However, most educational facilities do not have a Sport Psychology specialist present. A study by Hemmings and Povey (2002) revealed that less than 10% of surveyed physiotherapists had access to an

accredited sport psychologist. Of these physiotherapists, approximately half had never reported an athlete to a psychologist or counselor (Hemmings & Povey, 2002).

Wiese, Weiss, and Yukelson (1991) offer three explanations for why ATCs may not use psychological skills and strategies, and why they appear to be forgotten: "1) they may not be familiar with these techniques and thus reluctant to rank them highly during the rehabilitation process; 2) they may be familiar with these techniques but believe that injured athletes would not benefit or may be resistant to them; and 3) they believe these techniques are important but do not feel qualified to implement them and hesitate to refer to a Sport Psychology specialist" (pg. 23). Hemmings and Povey (2002) support this final suggestion finding that less than 9% of physiotherapists had ever referred an athlete to counseling or to a Sport Psychology specialist. Another study by Larson et al. (1996) revealed that only 24% of ATCs reported one or more counseling referrals for athletes with an injury. Furthermore, it was found that only 9% of athletic trainers had a standard written procedure for referring athletes to a counseling or Sport Psychology specialist (Larson et al., 1996). These studies have shown the lack of education and the need to educate ATCs about the use of sport psychology in the profession of athletic training.

To that end, sport physiotherapists and athletic trainers have stated a desire for increased training in psychology. In fact, in one study 84% of sport physiotherapists felt that they were inadequately trained in the psychological aspects of injury (Gordon et al., 1991). Furthermore, 87% of these same physiotherapists desired more applied information in this area (Gordon et al., 1991). Within the area of psychology, ATCs specifically requested training in:

> 1) recognizing their own limitations; 2) psychological aspects of sport injury; 3) applied psychological skills; 4) coping behaviors, recognizing psychological distress, and dealing with poor psychological response to injury; 5) dealing with athletes who incur severe injury; and 6) determining if an athlete is "malingering". (Ford & Gordon, 1994, pg. 144)

There are many ways to offer this training in the profession of athletic training. Eighty-five percent of ATCs in a study by Larson et al. (1996) reported that a course in sport psychology would be important in undergraduate athletic training education. However, only 54% of the surveyed ATCs have taken a formal sport psychology course in their undergraduate curricula. In addition to sport psychology education, ATCs have stressed the need for basic counseling skills. Moulton et al. (1997) found that only 36% of ATCs reported receiving education in basic counseling skills, and 79% stated the need to emphasize continuing education units focusing on counseling issues. Additional data in Moulton et al.'s (1997) study revealed that 86% of sports medicine staff members surveyed knew of the on-campus support services available to athletes. Of this sample an impressive 71% of staff members reported referring athletes to these services. However, only 24% of these referrals were due to issues related to athletic injury (Larson, Starkey, & Zaichkowsky, 1996). It appears that education in sport psychology, implementation of sport psychology skills and strategies, and the referral of athletes to campus support services or psychology professionals seems to be addressed rarely in athletic training curriculum and in the clinical setting.

Conclusion

ATCs have stated a desire to obtain more training in psychology intervention and referral, as well as how to use psychological techniques in their work (Wiese, Weiss, & Yukelson, 1991). Present data clearly indicates that ATCs may benefit from additional sport psychology training (Cramer Roh & Perna, 2000). With additional training in this area, ATCs may feel that they can improve their work with injured athletes. Even though the majority of ATCs are thoroughly prepared by their ATEPs to become entry-level athletic trainers, evidence shows that recently certified athletic trainers do not feel comfortable or confident in psychosocial intervention and

the referral process. Results from a previous qualitative study completed by Stiller-Ostrowski and Ostrowski (2009) indicated that undergraduate ATEPs may need to increase their focus on issues relating to the Psychosocial Intervention and Referral content area. Most ATCs felt that they lacked these strategies and knowledge making them underprepared in this aspect of their profession. Therefore, the primary purpose of this study is to evaluate ATEP directors' and clinically practicing ATCs' perceptions of the importance, criticality and preparedness of the fifteen Psychosocial Intervention and Referral competencies. In addition, the secondary purpose of this study is to evaluate how these same groups rank the twelve content areas of the *NATA Athletic Training Educational Competencies* manual (2006) based on importance, criticality and preparedness.

CHAPTER 2

METHODOLOGY

Participants

The target population of this study consisted of undergraduate ATEP directors and clinically practicing ATCs. One thousand ATCs were contacted and asked to participate in the current study. Of these, 88 (8.8% response rate) completed and returned the questionnaire. These participants were selected by the NATA through the Contact List Request Form (Appendix D) from the following employment settings: college student, high school, high school/clinic, junior college and university/college. In addition, 345 questionnaires were sent to ATEP directors requesting their participation. Of these, 53 (15.4% response rate) were completed and returned. The ATEP directors were selected from the accredited undergraduate ATEPs in the U.S. that are listed on the Commission on Accreditation of Athletic Training Education (CAATE) website. These participants were chosen by convenience/deliberate sampling due to the listing on the CAATE website. Program directors were defined as those individuals who presently coordinate their undergraduate ATEP curriculum. Overall, 1,345 questionnaires were distributed and 141 (10.5% response rate) were completed and returned.

Both groups of individuals were balanced across all NATA districts and consisted of both male and female participants. This study was approved by the Institutional Review Board (IRB) at Georgia Southern University (GSU), as well as the NATA, and all participants read an informed consent document before participating. Because participation was voluntary, although all participants were invited to participate, the respondents to the questionnaire could be considered to be a convenience sample. Thus, the undergraduate ATEP directors and clinically

practicing ATCs who responded to the questionnaire are characteristic of undergraduate ATEP directors and clinically practicing ATCs at similar employment settings across the U.S.

Questions that were mutually given to both participant groups are presented within the designated tables (Tables 1-9), including gender, race/ethnicity, type of institution, age, NATA district, certification method, credentials, highest level of education, and completed continuing education units (CEU). Participant breakdown by ATC employment setting and division is shown in Table 10. Participant breakdown by ATEP directors' institutional division is shown in Table 11. Lastly, participant breakdown by years of experience as an ATC and as an undergraduate ATEP director are listed in Table 12 and Table 13, respectively.

Procedures

Before completing the research study, an initial pilot study was completed. This was completed only to receive feedback from clinically practicing ATCs, as well as undergraduate and graduate ATEP faculty members on the format and content of the Athletic Training Educational Competency Questionnaire (ATECQ) (Appendix D). Cover letters and questionnaires (Appendix D), that included the informed consent document, were e-mailed to all potential participants in mid-January 2010. The cover letters discussed the purpose of the study, contained information regarding the ATECQ and asked the participants to complete the questionnaire honestly and to the best of their ability. Full completion and return of the questionnaire gave consent to use the questionnaires as data. A follow-up e-mail was distributed to all potential participants of the study after a two-week time period had elapsed from the initial e-mail. A five-week time limit was set for the potential participants to complete the questionnaire for their data to be included in the study. All methods were approved by the IRB at GSU.

Instrumentation

The ATECQ was developed for the purpose and completion of this research project. The questionnaire consisted of three sections: 1) general demographic questions, 2) rating of the Psychosocial Intervention and Referral competencies, and 3) ranking of the educational content areas. Experts in the field of athletic training education have established twelve content areas that contain cognitive and psychomotor competencies in which entry-level ATCs are to be minimally competent. These already instituted content areas and competencies will be utilized in this study without altercations. The twelve NATA athletic training educational content areas were ranked on importance, criticality, and preparedness. In addition, the fifteen individual competencies of the Psychosocial Intervention and Referral content area were specifically rated on importance, criticality, and preparedness. The NATA-BOC has defined importance and criticality in the following manner:

> Importance is deemed as the degree to which knowledge and competence in the content area or competency is essential to the job performance of a minimally competent ATC. Participants will indicate how important each content area or competency is to the performance of a minimally competent ATC (NATABOC, Inc, 2004, pg. 51)

> Criticality is defined as the degree to which adverse effects could result if the ATC is not competent in a content area or competency. Participants will indicate how critical to which the inability to perform tasks within each content area or competency would be seen as causing harm to a client, co-worker, the public, the environment, etc. Harm may be physical, emotional, financial, etc. (NATABOC, Inc, 2004, pg. 51)

Based on how the NATA-BOC defined importance and criticality, a preparedness variable was developed and defined for this study. Preparedness for undergraduate ATEP directors is defined as the degree to which a minimally competent ATC perceives to be prepared in each educational content area or competency. Participants will indicate the amount of preparation in which they perceive their ATEP provides their athletic training students in each educational content area or

competency to be a minimally competent ATC. Lastly, preparedness for clinically practicing ATCs is defined as the degree to which a minimally competent ATC perceives to be prepared in each educational content area or competency. Participants will indicate the amount of preparation in which they perceive their ATEP provided them in each educational content area or competency to be a minimally competent ATC. The above definitions were made available through an e-mail attachment to the initial and follow-up e-mail for the ATEP director participants to review before completing the ATECQ. Similarly, the above definitions were embedded in the initial and follow-up e-mail for the ATC participants to review before completing the ATECQ. Furthermore, the definitions were listed at the beginning of each appropriate section of the questionnaire in order to produce reliable and valid responses of the questionnaire.

The instrument was closely modeled after the fifth edition of the BOC's Role Delineation Study. Before completing the Role Delineation Study, experts reviewed a number of scales often used in role delineation studies for the purpose of collecting data. The panel of experts was very decisive in their choices, only selecting the most appropriate items for the athletic training profession and the purpose of their study. For the Role Delineation Study, the panel chose four scales to measure. These scales were used to "collect preliminary validation data from members of the panel of experts and final validation data from survey respondents" (NATABOC, Inc., pg. 51, 2004). These participants were asked to use a four-point Likert-scale (0-3) to evaluate the importance, criticality, frequency, and point in career for each survey item. A score of a three represented the highest rating and a score of a zero represented the lowest on the four-point Likert-scale.

In addition to assessing the validity of the Role Delineation Study, experts assessed the reliability of the scales. The reliability was examined to determine the consistency of the tasks of interest. This reliability was estimated as internal consistency utilizing the respondents' ratings of importance, criticality, and frequency. Cronbach's (α) alpha was used to measure the internal consistency of the scales. Each scale was measured to have a 0.70 or higher score illustrating adequate reliability of the scales (NATABOC, Inc., 2004).

It has been concluded through psychometric analysis that the scales used to examine the domains and tasks in the Role Delineation Study are both valid and reliable. Therefore, this study was organized to resemble portions of the BOC's Role Delineation Study. The instrument for the present research project was designed to contain three valid scales that seemed most appropriate to assess the education of the profession of athletic training and the purpose of the study. Two of the three scales, importance and criticality, have been previously validated through the BOC's Role Delineation Study. These scales were chosen for the purpose of collecting data to account for how athletic trainers evaluated the domains and competencies of athletic training. The third scale was added for the unique purpose of this study and was modeled after these two scales. These three scales were used to collect final validation data from the questionnaire respondents of this study.

The questionnaire used in this study consisted of 19 demographic questions, three ranking sections and three rating sections for undergraduate ATEP directors. The clinically practicing ATC questionnaire consisted of 17 demographic questions, three ranking sections and three rating sections. Each questionnaire took approximately fifteen minutes to complete. The questionnaires were broken down into four sections. The first section consisted of the informed consent document asking the participants to complete the ATECQ. The following section

collected demographic information. The third section specifically focused on the Psychosocial Intervention and Referral content area of the *NATA Athletic Training Educational Competencies* manual (2006). In this section, the participants rated the competencies of the Psychosocial Intervention and Referral content area on a four-point Likert-scale (0-3) to express each of the following: importance, criticality, and preparedness. Lastly, the participants ranked the twelve content areas of the fourth edition of the *NATA Athletic Training Educational Competencies* on importance, criticality, and preparedness. The questionnaires were administered electronically via http://www.surveymonkey.com.

Variables

The independent variable consisted of two participating groups. These groups included undergraduate ATEP directors and clinically practicing ATCs that were measured within three different categories. Therefore, the dependent variables that were computed regarding these two groups included importance, criticality, and preparedness.

The scores of the undergraduate ATEP directors from the ATECQ were collected electronically through the use of http://www.surveymonkey.com. The scores were separated into the categories of importance, criticality, and preparedness within each aspect of the questionnaire.

The scores of the clinically practicing ATCs from the ATECQ were also collected electronically through the use of http://www.surveymonkey.com. The scores were separated into the categories of importance, criticality, and preparedness within each aspect of the questionnaire.

The data collection period remained open for a five-week time period for the possible questionnaire respondents to complete the survey to have their data included in the study.

Statistical Analysis

A power analysis run through G*Power 3.0.10 software was completed to compute the required sample size for each independent group. The parameters entered into the software included a one-tailed independent T-test with an effect size of 0.50, an α (alpha) level of 0.01 (due to the number of statistical tests that will be completed), and a statistical power of 0.80. Output parameters established a total sample size of 164 (82 participants in each independent group). The degree of freedom of this power analysis was 162, the actual power was equal to 0.80 and the critical T-value was calculated to be 2.35.

The use of one-tailed independent T-tests was based on normal distributions within this research study. By using independent T-tests, it is assumed that the data will be collected from normally distributed populations. Furthermore, it is assumed that there will be homogeneity of variance, and the scores will be independent due to the fact that they will be collected from different individuals. Overall, through the use of independent T-tests significant differences between the independent groups on the dependent variables were evaluated.

SPSS version 17.0/18.0 was used for the statistical analysis of the subject data. The significance, or α (alpha) level, for all analyses was set at 0.01 due to the number of statistical tests that were completed, and an effect size of 0.50 was used which was determined prior to the start of the study. Frequencies and descriptive data were used to describe demographic information of the undergraduate ATEP directors and clinically practicing ATCs. In addition, a series of frequency analyses were conducted of the average ranks of undergraduate ATEP directors and clinically practicing ATCs in how they ranked the twelve content areas. These were completed to examine how each independent group ranked the content areas on the following categories: importance, criticality, and preparedness. A series of one-tailed independent T-tests

were performed to specifically examine the differences of undergraduate ATEP directors and clinically practicing ATCs in how they rated each of the fifteen competencies in the Psychosocial Intervention and Referral content area. These, too, were looked at in the following categories: importance, criticality, and preparedness.

In addition to completing the one-tailed independent T-tests, Levene's test was considered in order to test the hypothesis that the variances in the two independent groups were equal. This will clearly illustrate the differences, if any, between variances and if homogeneity of variances has been violated.

Cronbach's α (alpha) was calculated to measure the reliability of the ATECQ. By assessing the covariance of the two independent groups, it will establish the accuracy of the model across the two samples of participants in this study. By completing this additional step of the statistical analysis, the potential generalization of the research data was determined.

Lastly, a post hoc analysis run through G*Power 3.0.10 software was completed to compute the achieved power of the study. The parameters entered into the software included a one-tailed independent T-test with an effect size of 0.50, an α (alpha) level of 0.01 (due to the number of statistical tests that were completed), a sample size of 53, and a sample size of 88. Output parameters established a non-centrality parameter of 2.88, a critical t of 2.35, and a degree of freedom of 139. More importantly, this analysis illustrated a power of 0.70.

Pilot Study

A pilot study was completed utilizing non-probability sampling using a specific convenience sample. The pilot study included students and faculty members at Georgia Southern University. These individuals were either undergraduate or graduate athletic training faculty, or part-time (graduate assistant students) or full-time clinically practicing ATCs. All individuals

were gathered with the intention that they will provide information and feedback to the primary researcher on the format and content of the ATECQ. Changes to the format of the ATECQ were made based on the information gathered from the pilot study.

CHAPTER 3

RESULTS

The purpose of this study was to evaluate undergraduate ATEP directors' and clinically practicing ATCs' perceptions of the fifteen Psychosocial Intervention and Referral competencies of the fourth edition of the *NATA Athletic Training Educational Competencies* manual (2006). These competencies were rated on three variables: importance, criticality, and preparedness. In addition, this study evaluated the ATEP directors and clinically practicing ATCs ranking of the twelve content areas of the fourth edition of the *NATA Athletic Training Educational Competencies* manual (2006) on importance, criticality, and preparedness. Furthermore, this study yielded demographic data of undergraduate ATEPs and ATCs in the U.S.

Participants' Demographic Information

Of the 88 ATCs that completed the questionnaire, 73 (83.0%) felt responsible/accountable for treating the psychosocial aspects affecting athletes, while only 15 (17.0%) did not feel responsible/accountable. Within this same group, 63 (71.6%) ATCs had access to the services of a counselor or Sport Psychology specialist at their present employment setting. However, only 34 (38.6%) had referred an athlete for counseling or to a Sport Psychology specialist for injury or non-injury purposes in the past twelve months. This represents an average of approximately 2.8 referrals per person over the past year. Furthermore, 50 (56.8%) ATCs stated that their current place of employment had an established referral procedure, while 38 (43.2%) did not have an established referral procedure.

Additional questions were asked to ATEP directors to understand the length to which they incorporate sport psychology into their educational curricula. It was found that 2 (3.8%)

institutions currently have an undergraduate major in sport psychology, while 51 (96.2%) do not. Within the same group, there is 1 (1.9%) institution that is not aware of having a minor in sport psychology, 2 (3.8%) institutions that have a minor in sport psychology, and 50 (94.3%) institutions that do not have a minor in sport psychology. Of the same participants, it was found that 10 (18.9%) institutions had a graduate program in sport psychology, while 43 (81.1%) did not. Focusing specifically within the undergraduate athletic training programs, only 22 (41.5%) programs require athletic training students to complete a course in the psychosocial aspects of athletic training, while 31 (58.5%) do not. Table 14 lists the complete breakdown of the ATEP directors' responses. Lastly, ATEP directors responded that 24 (45.3%) of their institutions had a Sport Psychology consultant/specialist that student-athletes could be referred to, while 29 (54.7%) did not have an individual for student-athletes to be referred to. Most of these individuals were brought in from off-campus locations (39.6%), housed in the counseling center (11.3%), or the kinesiology/exercise science department (11.3%). Table 15 presents the breakdown of the ATEP director responses to this question.

Participants' Rankings of the Educational Content Areas

Frequency analyses were completed to examine how each group ranked the importance, criticality, and preparedness of the NATA athletic training educational content areas. Table 16 illustrates the average responses of ATCs and ATEP directors on the importance, criticality, and preparedness of each NATA educational content area (1 = highest ranking, 12 = lowest ranking). Within the importance variable, ATEP directors ranked the top three NATA educational content areas as, 1) Acute Care of Injuries and Illnesses (M = 2.08), 2) Orthopedic Clinical Examination and Diagnosis (M = 2.22), and 3) Risk Management and Injury Prevention (M = 2.78). The Psychosocial Intervention and Referral content area was ranked 9th out of the 12 content areas

(M = 8.11). The results also illustrated that ATEP directors ranked Acute Care of Injuries and Illnesses (M = 1.78), Orthopedic Clinical Examination and Diagnosis (M = 2.71), and Risk management and Injury Prevention (M = 2.90) as the top three critical content areas. The Psychosocial Intervention and Referral content area was ranked 9th out of 12 (M = 7.56). Lastly, the ATEP directors ranked the top three content areas in which they prepared their undergraduate students as, 1) Orthopedic Clinical Examination and Diagnosis (M = 1.74), 2) Acute Care of Injuries and Illnesses (M = 2.40), and 3) Risk Management and Injury Prevention (M = 3.18). The Psychosocial Intervention and Referral content area was ranked 12th out of the 12 content areas for preparedness (M = 9.13).

Similar results were found within the ATC participant group. Within the importance variable, ATCs ranked the top three NATA educational content areas as, 1) Acute Care of Injuries and Illnesses (M = 1.68), 2) Orthopedic Clinical Examination and Diagnosis (M = 2.26), and 3) Risk Management and Injury Prevention (M = 2.57). The Psychosocial Intervention and Referral content area was ranked 8th out of 12 (M = 7.17). Within the variable of criticality, ATCs ranked Acute Care of Injuries and Illnesses (M = 1.68), Orthopedic Clinical Examination and Diagnosis (M = 2.92), and Risk Management and Injury Prevention (M = 3.04) as the top three critical content areas. Similar to ATEP directors, ATCs ranked the Psychosocial Intervention and Referral content area 9th out of the 12 content areas (M = 6.45). Lastly, ATCs ranked Acute Care of Injuries and Illnesses (M = 1.93), Orthopedic Examination and Diagnosis (M = 2.56), and Risk Management and Injury Prevention (M = 3.12) as those content areas that they were most prepared in by their undergraduate ATEP. The Psychosocial intervention and Referral content area was ranked 10th out of 12 (M = 7.93) by the participating ATCs.

Participants' Ratings of the Psychosocial Intervention and Referral Competencies

In addition to ranking the athletic training educational content areas, the participants also rated the Psychosocial Intervention and Referral competencies within the importance, criticality, and preparedness variables. T-tests completed on the overall means of the competencies illustrated no difference between the ATEP directors' and ATCs' ratings of importance ($p = 0.1435$), criticality ($p = 0.3755$), and preparedness ($p = 0.3775$). In addition, a series of 45 one-tailed independent T-tests were performed comparing the participants' ratings of the importance, criticality, and preparedness of the individual Psychosocial Intervention and Referral competencies. The T-tests for equality of means showed no differences between the ATEP directors' and ATCs' ratings of importance, criticality, or preparedness for the fifteen Psychosocial Intervention and Referral competencies.

However, it is important to note that while the one-tailed T-tests revealed that ATCs did not rate any competencies as more important, critical, or prepared than ATEP directors, further inspection shows that ATEP directors did rate two competencies as more important than clinically practicing ATCs. These included the competencies that "describe the roles and function of various community based health care providers and the accepted protocols that govern the referral of patients to these professionals" (Competency 7) (NATA, 2006, pg. 35) and that "indentify the symptoms and clinical signs of common eating disorders and the psychological and sociocultural factors associated with these disorders" (Competency 10) (NATA, 2006, pg. 36). On average, ATEP directors rated Competency 7 as more important ($M = 1.98$, $SD = 0.80$), than ATCs ($M = 1.65$, $SD = 0.77$) ($p = 0.0075$). On average, ATEP directors rated Competency 10 as more important ($M = 2.62$, $SD = 0.56$), than ATCs ($M = 2.38$, $SD =$

0.63) ($p = 0.01$). The results of these analyses are presented within the designated tables (Tables 17-19).

Reliability of the ATECQ

Cronbach's α (alpha) was calculated to measure the reliability of the ATECQ. Alpha coefficients usually range in value from 0 to 1 and may be used to describe the reliability of a questionnaire or survey. It is stated that the higher the score, the more reliable the generated scale is. Nunnally (1978) identified 0.70 as an acceptable reliability coefficient. The reliability of the ATECQ was 0.933, showing that the ATECQ has a moderately high level of reliability. With item deletion, Cronbach's α (alpha) drops to a value of 0.929 suggesting that the ATECQ has no items that cause a significant decrease in reliability. Therefore, the ATECQ used in this study can be considered a reliable questionnaire.

CHAPTER 4

DISCUSSION

The purpose of this study was to evaluate ATCs' and ATEP directors' perceptions of the importance, criticality, and preparedness of the fifteen Psychosocial Intervention and Referral competencies in athletic training. This area of the educational curricula includes, "communication skills, motivation and adherence strategies, social support and basic counseling skills, mental skills training, and potential referral situations" (Stiller-Ostrowski & Ostrowski, 2009, pg. 69). A secondary purpose of this study was to identify ATEP directors' and ATCs' rankings of the twelve content areas in the *NATA Athletic Training Educational Competencies* manual (2006) on the same variables of importance, criticality, and preparedness.

Research by Wiese, Weiss, and Yukelson (1991) stated that the ultimate goal of the ATC is to physically treat the injured athlete and return them to competition as soon as possible. Based on this, most ATCs feel that they should spend more time treating the physical aspects of injury than the psychological component. Results from the present study support this philosophy and show that ATCs and ATEP directors perceive the physical components of injuries to be more important than the psychological.

Based on the results of the current study, it was found that ATCs and ATEP directors ranked the top three content areas within each factor (importance, criticality, and preparedness) as, acute care of injuries and illnesses, orthopedic clinical examination and diagnosis, and risk management and injury prevention. These content areas deal almost solely with the physical aspects of injury. This is not surprising considering Williams (2006) and Tracey (2003) found that the physical aspects of injury are emphasized within athletic training because injuries are seen as a physical problem. Furthermore, the BOC examination focuses predominantly on these

content areas, thus causing ATEP curricula to focus more on the above content areas. With this heavy focus on the physical components of injury, it is not surprising that ATCs and ATEP directors of the current study ranked the psychosocial content area lower than most other areas.

In relation to the research question concerning the ranking of the content areas, the results of the present study illustrate that both the ATEP directors and ATCs ranked the Psychosocial Intervention and Referral content area relatively low when compared to the other content areas. In fact, both groups ranked this content area in the bottom 50% of all content areas on importance, criticality, and preparedness. These results suggest that, as a whole, ATCs and ATEP directors do not feel that the psychosocial aspects in athletic training are as important or critical as the other content areas in athletic training. Since ATEP directors do not find the psychosocial aspects as important or critical compared to other areas of athletic training, they may be less likely to spend time preparing students in this area. In fact, based on the results of the current study it appears that ATEP directors spend most of their time preparing students in the areas of athletic training that they rank as most important and critical. This is also seen with the low preparedness ranking ATCs reported for the Psychosocial Intervention and Referral content area. It appears that due to the lack of importance and criticality placed on the Psychosocial Intervention and Referral content area compared to the other content areas, ATCs are not as prepared in this area compared to other content areas. Due to this lack of preparation, ATCs do not feel as comfortable or confident in psychosocial interventions (Cramer Roh & Perna, 2000). This is related to Stiller-Ostrowski and Ostrowki's (2009) study that showed that ATCs felt underprepared to provide counseling support to athletes, carry out mental skills training, and know when and how to refer athletes to other healthcare professionals.

Further supporting this, the participants of the study completed a section in the ATECQ in which they rated the individual competencies of the Psychosocial Intervention and Referral content area on importance, criticality, and preparedness. It was found that the overall means for each competency from both groups within the importance, criticality, and preparedness variables were very low. Specifically, the ATCs rated the importance of the psychosocial competencies, on a Likert scale (0 = low, 3 = high), as a 1.79, while the ATEP directors rated these competencies on average as a 1.91. In addition, the ATCs rated the criticality as a 1.25, while ATEP directors rated it as a 1.19. Lastly, ATCs rated the preparedness of the psychosocial competencies as a 1.42, while the ATEP directors rated it as a 1.46. Reviewing each group's ratings of the competencies suggests that both ATCs and ATEP directors view them as only moderately important and critical, and believe they are mildly prepared for them. These results corroborate ATCs' and ATEP directors' rankings of the content areas and suggest that the psychosocial content area is less valued than others.

The current results appear to be contradictory to previous research by Wiese, Weiss, and Yukelson (1991) which suggested that ATCs are aware of the importance of psychological skills and strategies taught within the Psychosocial Intervention and Referral content area. A more recent study by Arvinen-Barrow, Hemmings, Weigand, Becker, and Booth (2007) stated that many sports medicine professionals recognize the importance of treating the psychological factors associated with injury. Specifically, Lafferty et al. (2008) showed that 96% of physiotherapists thought it was important to treat the psychological aspects of injury. However, the current data suggests that the Psychosocial Intervention and Referral content area ranks approximately 9th out of twelve on importance and criticality for ATCs and ATEP directors relative to the other content areas. Based on this, it appears that ATCs and ATEP directors in the

current study believe that the Psychosocial Intervention and Referral content area is less important and critical, and they are less prepared than participants in previous studies. However, the current study asked participants to rank this content area relative to the other eleven content areas. Therefore, the low rankings may simply be a reflection of how the participants feel about this content area when compared to others and not an indication of their general feelings about the Psychosocial Intervention and Referral content area. For example, the participants in the current study may believe this area is very important, just not as important as other content areas. In that regard, the results of the current study may not contradict previous research, but rather it may enhance them.

Data from the one-tailed independent T-tests showed that there were no significant differences in the ATEP directors' and ATCs' ratings of the fifteen individual Psychosocial Intervention and Referral competencies within the importance, criticality, and preparedness variables. More importantly, one-tailed independent T-tests of all competencies showed no significant differences between the ATEP directors' and ATCs' ratings of the psychosocial content area as a whole. However, it is important to note that further inspection of the data revealed two differences between these groups within the importance variable. The first involved the ATEP directors (M = 1.98) perceiving that it was more important to "describe the roles and function of various community based health care providers and the accepted protocols that govern the referral of patients to these professionals" (NATA Athletic Training Educational Competencies, 2006, pg. 35) than ATCs (M = 1.65). This suggests that ATEP directors feel that it is essential to the job of an ATC to know the roles and functions of other health care providers and the accepted referral process for an athlete with psychosocial difficulties because of the psychological and physical harm that it could cause the athlete. The difference between ATCs

and ATEP directors may stem from the ATCs lacking education (decreased preparation) on the referral process.

While it does not represent a significant difference in this study, the ATCs' lower rating for the importance of the referral competency (Competency 7) is consistent with other results from the present study. It was found that only 38.6% of ATCs have referred an athlete for counseling or to a Sport Psychology specialist for injury or non-injury purposes in the past twelve months. This breaks downs to approximately 2.8 referrals per ATC. These results are similar to a study by Larson et al. (1996) showing that only 24% of ATCs reported one or more counseling referrals. A more recent study by Hemmings and Povey (2002) stated that less than 9% of physiotherapists had ever referred an athlete to counseling or to a Sport Psychology specialist. With the minimal number of referrals that are being made, ATCs may view this competency as less important than others.

The lack of referrals seen within this study may be due, in part, to four important factors. First, ATCs are hesitant to refer an athlete to a Sport Psychology specialist (Wiese, Weiss, & Yukelson, 1991). Stiller-Ostrowski and Ostrowski (2009) suggested that this may be due to the fact that ATCs feel unprepared to know when and how to refer athletes to other healthcare professionals. A second reason why the ATC referral rate appears to be low is because of the lack of an established written procedure at their current place of employment. The results of the present study showed that 50 (56.8%) ATCs had an established written referral procedure for those patients exhibiting sociocultural, mental, emotional, and/or psychological behavioral problems/issues. This is an improvement from previous research by Larson et al. (1996) which found that only 9% of athletic trainers had a standard written procedure for referring athletes to a counseling or Sport Psychology specialist. Even though there has been some improvement, there

is still an overall need to establish additional referral procedures. A third reason why ATCs may not refer an athlete for psychosocial problems/issues is because they may not notice that an athlete is experiencing a psychological problem. Therefore, ATCs may not be able to identify the clinical signs and symptoms of mental disorders, emotional disorders, or personal/social conflicts. This suggestion is supported by the findings that ATCs feel underprepared in the psychosocial content area. More specifically, the ATCs rated the competency (12) dealing with this area of referral low on preparedness. This suggests that ATCs may not be prepared to recognize these psychological problems. The fourth reason for the low referral rate is that ATCs may not have access to a counselor or Sport Psychology specialist. However, results from the present study illustrate that 71.3% (63) of ATCs have access to the services of a counselor or a Sport Psychology specialist at their present institution. Similar results were shown by ATEP directors in that 50.9% (27) stated that a Sport Psychology specialist was available on campus for the referral of student-athletes. This is consistent with previous research by Moulton et al. (1997) finding that 86% of sports medicine staff members knew of the on-campus support services available to student-athletes. However, more recently, a study by Hemmings and Povey (2002) found that less than 10% of surveyed physiotherapists had access to an accredited sport psychologist. Based on the results of the current study, it appears that availability of a counselor or Sport Psychology specialist did not hinder referrals. Rather, the lack of referrals is probably due to the low ratings for preparedness in this area.

The second difference between ATCs and ATEP directors was seen within the 10th competency that states that ATCs should be able to "identify the symptoms and clinical signs of common eating disorders and the psychological and sociocultural factors associated with these disorders" (NATA Athletic Training Educational Competencies, 2006, pg. 35). It was found that

ATEP directors (M = 2.62) perceive that this competency is more important than ATCs (M = 2.38). This indicates that when compared to ATEP directors, ATCs may not feel that it is essential to be proficient within this competency compared to others. ATCs may not find this competency as important because they may not encounter eating disorders as often as other physical injuries and illnesses. This suggestion is consistent with a recent study that indicated only four athletes out of a sample of 204 were identified as having eating disorders (Greenleaf, Petrie, Carter, & Reel, 2009).

Overall, it was found that ATCs and ATEP directors rated the importance, criticality, and preparedness of the Psychosocial Intervention and Referral competencies similarly. Even though there were no significant differences within the one-tailed independent T-tests, two differences occurred between these groups in the 7th and 10th competencies. These two competencies deal with the referral process to other health care providers and psychological factors associated with common eating disorders. These findings suggest that ATEP directors feel that the 7th and 10th competencies are more essential to the job performance of an ATC than clinically practicing ATCs do. With this, ATEP directors may feel that these two competencies are more important because of their position and their previous experiences. On the other hand, ATCs may not perceive these competencies as important due to their lack of education, experience, and preparation within this area.

In relation to the current study, previous research has stated that undergraduate ATEPs may need to increase their focus on issues relating to the Psychosocial Intervention and Referral content area (Stiller-Ostrowski & Ostrowski, 2009). This was specifically seen in a study by Gordon et al. (1991) which illustrated that 84% of sport physiotherapists felt that they were inadequately trained in the psychological aspects of injury. Regarding the present study, it was

found that ATCs ranked their preparedness of Psychosocial Intervention and Referral content area 10^{th} (M = 7.93) out of the 12 content areas. This relates to previous research by Stiller-Ostrowski and Ostrowski (2009) which found that ATCs feel underprepared to provide counseling support to athletes and carry out mental skills training. This suggests that ATEPs do not prepare entry-level ATCs to be proficient within this content area, thus potentially compromising the effectiveness of ATCs clinical work due to their lack of confidence and comfort level.

The results of the independent T-test and how both groups ranked the NATA athletic training educational content areas can be related to the current state of psychosocial education within undergraduate ATEPs. As of today's curricula, a course specific to the psychosocial aspects in athletic training is still not required. In addition, several higher educational institutions do not offer a class in the psychosocial intervention and referral aspects of athletic training. The present study examined ATEPs requirement to complete a course specifically in the psychosocial aspects in athletic training. Results showed that more than half (58.5%) of undergraduate ATEPs still do not require students to complete a course in this area. This is consistent with a study by Larson et al. (1996) which found that while 85% of ATCs felt a course in sport psychology would be important, only half (54%) of the ATCs had taken a formal sport psychology course in their undergraduate curricula. This suggests that there has been no improvement toward implementing a course concentrating on the psychosocial issues of athletic training in recent years. This is despite the fact that recent research completed by Lafferty et al. (2008) illustrated that 82% of physiotherapists valued the incorporation of sport psychology in their curricula.

Failure to institute a course in the psychosocial aspects of athletic training can be related to how ATCs and ATEP directors ranked the overall psychosocial content area, as well as how

they rated the individual competencies in this content area. Compared to other content areas, the Psychosocial Intervention and Referral content area was ranked below 50% in the areas of importance and criticality within both participating groups. Due to how the psychosocial aspects are ranked on importance and criticality, ATEP directors appear to allocate less time toward the competencies within this content area. Therefore, a specific course has not been established, thus decreasing the preparation of clinically practicing ATCs. This claim is supported by how low the ATCs currently ranked the psychosocial content area on preparation when compared to the other content areas.

It can also be assumed that a course has not be implemented due to the lack of space ATEP directors state they have in their program to institute an additional course in this area. The results from the present study reflect how current ATEP curricula are set up, placing most of the program's emphasis on the content areas that both ATEP directors and ATCs ranked highly. Therefore, the Psychosocial Intervention and Referral content area receives less attention compared to other more important and critical content areas, such as risk management and injury prevention, orthopedic clinical examination and diagnosis, and acute care of injuries and illnesses. Lastly, it can be assumed that, just like ATCs, ATEP directors do not feel qualified to educate athletic training students in the psychosocial aspects of athletic training, or the institution may not have an individual qualified to teach a course specified in this area.

Based on these low ratings for importance and criticality, it is not surprising that the ratings for preparedness were also low. In fact, only one competency (10) was rated above a 2.0 on the four-point Likert scale (0-3) by the ATEP directors. Interestingly, this competency was rated as the most important and critical by both ATCs and ATEP directors. Overall, these results suggest that programs are doing little to prepare ATCs in this content area. In fact, the

psychosocial content area was ranked 10th and 12th by ATCs and ATEP directors, respectively, on preparedness. This is consistent with previous research which showed that undergraduate ATEPs may need to increase their focus on issues relating to the Psychosocial Intervention and Referral content area (Stiller-Ostrowski & Ostrowski, 2009). This study also showed that ATCs felt underprepared to provide counseling support to athletes. Based on this research, it appears that ATCs and ATEP directors place less value on the psychosocial content area and, thus, spend less time preparing ATCs in this area. In addition, a recent study by Lafferty et al. (2008) showed that 82% of surveyed physiotherapists valued the incorporation of sport psychology into their educational curricula. However, there still appears to be a disconnect between the incorporation of a course focusing on the psychosocial aspects, and how important and critical the psychosocial aspects in athletic training can be. This may be due to that results from the present study show that 20 (37.7%) ATEP directors also work as clinically practicing ATCs, while 33 (62.3%) do not work clinically.

The lack of focus on this area appears to extend beyond undergraduate programs. Results from this study indicate that only 37 subjects (35.6%) from both the ATEP director group and ATC group completed CEUs in the past five years in the area of psychosocial intervention and referral. Within ATEP directors, an average of 10.6 CEUs was completed by each of the 19 individuals that completed at least one CEU in the area of Psychosocial Intervention and Referral. However, three of the participants completed 30, 40, and 70 CEUs in this area. If these three are removed, the average drops to 3.8 CEUs per individual. Similarly, only 18 ATCs completed CEUs in the Psychosocial Intervention and Referral content area at an average of 3.3 CEUs per person. These appear to contradict results from the Gordon et al. (1991) and Moulton et al. (1997) studies which showed that ATCs desired increased training and applied information

(87%) in the area of psychological aspects of injury, and that 79% of ATCs stated the need to emphasize CEUs on counseling issues. Thus, it appears that while some ATCs may desire more continuing education in this area, they are not completing the related CEUs. This could be due to several reasons; 1) since the previous studies were completed, ATCs and ATEP directors may have decided that psychosocial aspects in athletic training are less important and critical than other areas in athletic training, 2) the opportunity for CEUs in the Psychosocial Intervention and Referral content area are not available or are less frequently available, 3) ATCs and ATEP directors do not believe they will benefit from increasing their skills and strategies in this area, and 4) ATCs and ATEP directors feel that they are not responsible for treating or educating the psychosocial aspects that affect athletes. Based on the ATCs' and ATEP directors' rankings of the content areas, it can be assumed that they feel other areas are more important and thus more deserving of CEUs.

Due to the lack of a formalized course within curriculums and a low CEU completion rate, there appears to be limited exposure to education in the psychosocial area for athletic trainers. This was further supported by the low ratings of preparedness by ATCs and ATEP directors. This is troubling when one considers previous research by Lafferty et al. (2008) which stated that 96% of physiotherapists thought it was important to treat the psychological aspects of injury. Other research states that many sports medicine professionals recognize the importance of treating the psychological factors associated with injury (Arvinen-Barrow, Hemmings, Weigand, Becker, & Booth, 2007). In accordance with Lafferty et al.'s (2008) study, the present study showed that 83% of ATCs felt responsible/accountable for treating the psychosocial aspects affecting athletes. Taken together, these results suggest that while ATCs feel responsible for providing these services, they are unprepared to do so and believe their ability to offer such

services are less important and critical than other areas of treatment. Wiese, Weiss, and Yukelson (1991) suggest several reasons why ATCs may not implement aspects of sport psychology into their practice. These include: 1) not being familiar with the psychological skills and strategies, 2) believing that injured athletes would not benefit from these skills and strategies, and 3) not feeling qualified to implement and are hesitant to refer to a Sport Psychology specialist. These seem to be supported by the current study which showed that ATCs view this area as less important and critical than other areas and are underprepared to provide these services. However, since ATCs do believe it is part of their job to treat athletes in this area, it may be beneficial to offer more courses and additional CEU opportunities so that ATCs will feel more comfortable and confident in the psychosocial aspects in athletic training.

Psychological effects have been found to occur and greatly influence all stages of the injury process, especially the rehabilitation phase (Arvinen-Barrow, Hemmings, Weigand, Becker, & Booth, 2007). However, the physical aspects of injury and rehabilitation are emphasized because injuries are thought to be more of a physical problem. This study found that ATCs and ATEP directors rate the importance, criticality, and preparedness of the Psychosocial Intervention and Referral competencies, as a whole, at the same level. In addition, compared to the other content areas, ATCs and ATEP directors rank the importance, criticality, and preparedness of this content area below 50%, with those that are physical in nature ranking the highest. A need for more education and continuing education opportunities in the area of psychosocial intervention is needed. Entry-level ATCs should be proficient in all fifteen psychosocial competencies through a course dedicated to this area of athletic training. Until this occurs, complete rehabilitation, physically and psychologically, of the athlete will not occur.

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TABLES

Table 1

Participant Breakdown by Gender

	Frequency	% of Total Participants
ATCs		
Female	53	60.2 %
Male	35	39.8 %
Total	88	100.0 %
ATEP Directors		
Female	26	49.1 %
Male	27	50.9 %
Total	53	100.0 %
Both*		
Female	**79**	**56.0 %**
Male	**62**	**44.0 %**
Total	**141**	**100.0 %**

NOTE: *=both ATC and ATEP Director

Table 2

Participant Breakdown by Race/Ethnicity

	Frequency	% of Total Participants
ATCs		
African/African American	2	2.3 %
Asian/Asian American	1	1.1 %
Caucasian/European American	80	90.9 %
Hispanic/Hispanic American	3	3.4 %
Native American	1	1.1 %
Other	1	1.1 %
Total	88	100.0 %
ATEP Directors		
African/African American	1	1.9 %
Asian/Asian American	1	1.9 %
Caucasian/European American	49	92.5 %
Hispanic/Hispanic American	2	3.8 %
Native American	-	-
Other	-	-
Total	53	100.0 %
Both*		
African/African American	**3**	**2.1 %**
Asian/Asian American	**2**	**1.4 %**
Caucasian/European American	**129**	**91.5 %**
Hispanic/Hispanic American	**5**	**3.6 %**
Native American	**1**	**0.7 %**
Other	**1**	**0.7 %**
Total	**141**	**100.0 %**

NOTE: *=both ATC and ATEP Director

Table 3

Participant Breakdown by Type of Institution

	Frequency	% of Total Participants
ATCs		
Private	31	35.2 %
Public	57	64.8 %
Total	88	100.0 %
ATEP Directors		
Private	22	41.5 %
Public	31	58.5 %
Total	53	100.0 %
Both*		
Private	**53**	**37.6 %**
Public	**88**	**62.4 %**
Total	**141**	**100.0 %**

NOTE: *=both ATC and ATEP Director

Table 4

Participant Breakdown by Age

	Frequency	% of Total Participants
ATCs		
21-30	60	68.3 %
31-40	15	17.0 %
41-50	9	10.2 %
51-60	3	3.4 %
61-70	-	-
71-80	1	1.1
Total	88	100.0 %
ATEP Directors		
21-30	2	3.8 %
31-40	13	24.5 %
41-50	26	49.0 %
51-60	11	20.8 %
61-70	1	1.9 %
71-80	-	-
Total	53	100.0 %
Both*		
21-30	**62**	**44.0 %**
31-40	**28**	**19.9 %**
41-50	**35**	**24.8 %**
51-60	**14**	**9.9 %**
61-70	**1**	**0.7 %**
71-80	**1**	**0.7 %**
Total	**141**	**100.0 %**

Note: *=both ATC and ATEP Director

Table 5

Participant Breakdown by NATA District

NATA District	Frequency	% of Total Participants
ATCs		
1	6	6.8 %
2	7	8.0 %
3	5	5.7 %
4	16	18.2 %
5	10	11.4 %
6	5	5.7 %
7	11	12.5 %
8	9	10.2 %
9	10	11.4 %
10	9	10.2 %
Total	88	100.0 %
ATEP Directors		
1	7	13.2 %
2	9	17.0 %
3	7	13.2 %
4	9	17.0 %
5	5	9.4 %
6	2	3.8 %
7	5	9.4 %
8	4	7.5 %
9	4	7.5 %
10	1	1.9 %
Total	53	100.0 %
Both*		
1	**13**	**9.2 %**
2	**16**	**11.4 %**
3	**12**	**8.5 %**
4	**25**	**17.7 %**
5	**15**	**10.6 %**
6	**7**	**5.0 %**
7	**16**	**11.3 %**
8	**13**	**9.2 %**
9	**14**	**10.0 %**
10	**10**	**7.1 %**
Total	**141**	**100.0 %**

NOTE: *=both ATC and ATEP Director

Table 6

Participant Breakdown by Certification Method

Certification Method	Frequency	% of Total Participants
ATCs		
Curriculum (Online)	28	31.8 %
Curriculum (Written/Practical Exam)	40	45.5 %
Internship (Written/Practical Exam)	20	22.7 %
Total	88	100.0 %
ATEP Directors		
Curriculum (Online)	-	-
Curriculum (Written/Practical Exam)	24	45.3 %
Internship (Written/Practical Exam)	29	54.7 %
Total	53	100.0 %
Both		
Curriculum (Online)	**28**	**20.0 %**
Curriculum (Written/Practical Exam)	**64**	**45.4 %**
Internship (Written/Practical Exam)	**49**	**34.6 %**
Total	**141**	**100.0 %**

NOTE: *=both ATC and ATEP Director

Table 7

Participant Breakdown by Credentials

Credentials	Frequency	% of Total Participants
ATCs		
ATC	88	100.0 %
CC-AASP	-	-
CSCS	12	13.6 %
DPT/PT/PTA	1	1.1 %
EMT	5	5.7 %
MD/DO	-	-
PES/CES	4	4.5 %
Other	8	9.1 %
ATEP Directors		
ATC	53	100.0 %
CC-AASP	-	-
CSCS	5	9.4 %
DPT/PT/PTA	3	5.7 %
EMT	1	1.9 %
MD/DO	-	-
PES/CES	-	-
Other	5	9.4 %
Both*		
ATC	**141**	**100.0 %**
CC-AASP	**-**	**-**
CSCS	**17**	**12.1 %**
DPT/PT/PTA	**4**	**2.8 %**
EMT	**6**	**4.3 %**
MD/DO	**-**	**-**
PES/CES	**4**	**2.8 %**
Other	**13**	**9.2 %**

NOTE: *=both ATC and ATEP Director

Table 8

Participant Breakdown by Highest Level of Education

Highest Level of Education	Frequency	% of Total Participants
ATCs		
Bachelor's	40	45.5 %
Master's	44	50.0 %
Doctoral	4	4.5 %
Total	88	100.0 %
ATEP Directors		
Bachelor's	-	-
Master's	21	39.6 %
Doctoral	32	60.4 %
Total	53	100.0 %
Both*		
Bachelor's	**40**	**28.4 %**
Master's	**65**	**46.1 %**
Doctoral	**36**	**25.5 %**
Total	**141**	**100.0 %**

NOTE: *=both ATC and ATEP Director

Table 9

Participant Breakdown by CEUs

	Frequency	% of Total Participants
ATCs		
No	69	78.4 %
Yes	19	21.6 %
Total	88	100.0 %
ATEP Directors		
No	35	66.0 %
Yes	18	34.0 %
Total	53	100.0 %
Both*		
No	**104**	**73.8 %**
Yes	**37**	**26.2 %**
Total	**141**	**100/0 %**

NOTE: *=both ATC and ATEP Director

Table 10

ATC Breakdown by Employment Setting & Division

	Frequency	% of Total Participants
Employment Setting		
College Student	6	6.8 %
High School	21	23.9 %
High School/Clinic	21	23.9 %
Junior College	6	6.8 %
University/College	34	38.6 %
Total	88	100.0 %
Division		
Non-Collegiate	**48**	**54.5 %**
I	**20**	**22.7 %**
II	**4**	**4.5 %**
III	**11**	**12.5 %**
NAIA	**5**	**5.7 %**
Total	**88**	**100.0 %**

Table 11

ATEP Director Breakdown by Division

	Frequency	% of Total Participants
Division		
I	**23**	**43.3 %**
II	**15**	**28.3 %**
III	**12**	**22.6 %**
NAIA	**3**	**5.7 %**
Total	**53**	**100.0 %**

Table 12

ATC Breakdown by Years of Experience

	Frequency	**% of Total Participants**
≤ 5	54	61.4 %
> 5 – 10	13	14.8 %
> 10 – 15	9	10.2 %
> 15 – 20	5	5.7 %
> 20 – 25	4	4.5 %
> 25 – 30	2	2.3 %
> 30 – 35	-	-
> 35 – 40	1	1.1 %
Total	**88**	**100.0 %**

Table 13

ATEP Director Breakdown by Years of Experience

	Frequency	**% of Total Participants**
≤ 5	20	37.7 %
> 5 – 10	21	39.6 %
> 10 – 15	4	7.5 %
> 15 – 20	1	1.9 %
> 20 – 25	3	5.7 %
> 25 – 30	1	1.9 %
> 30 – 35	3	5.7 %
> 35 – 40	-	-
Total	**53**	**100.0 %**

Table 14

ATEP Director Breakdown by Sport Psychology Education

Type of Program	Frequency	% of Total Participants
Undergraduate Program		
No	51	96.2 %
Yes	2	3.8 %
Total	53	100.0 %
Minor		
I am not aware of a minor	1	1.9 %
No	50	94.3 %
Yes	2	3.8 %
Total	53	100.0 %
Graduate Program		
No	43	81.1 %
Yes	10	18.9 %
Total	53	100.0 %
Course Completion Required*		
No	**31**	**58.5 %**
Yes	**22**	**41.5 %**
Total	**53**	**100.0 %**

NOTE: *=Undergraduate athletic training students required to complete a course specifically in the psychosocial aspects in athletic training.

Table 15

ATEP Director Breakdown by Availability of a Sport Psychology Specialist

	Frequency	% of Total Participants
Sport Psychology Specialist		
I am not aware of an individual	2	3.8 %
No	27	50.9 %
Yes	24	45.3 %
Total	**53**	**100.0 %**
Location of Sport Psychology Specialist		
Athletic Department	2	3.8 %
Counseling Center	6	11.3 %
Counseling Department	2	3.8 %
Kinesiology/Exercise Science Department	6	11.3 %
Not Available on Campus	21	39.6 %
Other	3	5.7 %
Psychology Department	3	5.7 %
N/A	10	18.9 %
Total	**53**	**100.0 %**

Table 16

Average Rank of the NATA Educational Content Areas

	Response Average Importance		**Response Average Criticality**		**Response Average Preparedness**	
	ATCs	ATEP Directors	ATCs	ATEP Directors	ATCs	ATEP Directors
Risk Management & Injury Prevention	2.57	2.78	3.04	2.90	3.12	3.18
Pathology of Injuries & Illnesses	3.59	4.57	4.41	5.88	3.78	4.74
Orthopedic Clinical Examination & Diagnosis	2.26	2.22	2.92	2.71	2.56	**1.74**
Medical Conditions & Disabilities	4.77	5.47	4.41	5.03	5.40	5.92
Acute Care of Injuries & Illnesses	**1.68**	**2.08**	**1.68**	**1.78**	**1.93**	2.40
Therapeutic Modalities	5.16	5.94	5.49	5.71	4.73	5.40
Conditioning & Rehabilitative Exercise	4.40	4.81	5.38	5.60	4.72	4.86
Pharmacology	8.11	8.50	6.41	6.90	8.49	8.86
Psychosocial Intervention & Referral	7.17	8.11	6.45	7.56	7.93	9.13
Nutritional Aspects of Injuries & Illnesses	7.34	8.01	7.49	8.49	7.67	8.24
Health Care Administration	7.93	8.74	8.83	9.79	7.97	8.86
Professional Development & Responsibility	2.83	8.81	8.78	10.10	7.28	8.79

NOTE: **Bold Results=**Illustrates those NATA Educational Content Areas that ATCs and ATEP directors perceived as most important, critical, and prepared.

Table 17

One-Tailed Independent Samples Test for Importance

	ATCs		ATEP Directors		Significance (p-value)
	Mean	Standard Deviation	Mean	Standard Deviation	
Competency 1	1.74	0.652	1.74	0.812	0.491
Competency 2	1.68	0.670	1.79	0.769	0.1855
Competency 3	1.99	0.669	2.00	0.760	0.463
Competency 4	1.32	0.687	1.43	0.910	0.213
Competency 5	1.39	0.794	1.43	0.844	0.3685
Competency 6	1.91	0.705	2.04	0.808	0.1615
Competency 7	1.65	0.774	1.98	0.796	0.0075
Competency 8	1.50	0.711	1.58	0.887	0.2775
Competency 9	1.83	0.647	2.09	0.766	0.015
Competency 10	2.38	0.631	2.62	0.562	0.01
Competency 11	2.09	0.705	2.30	0.723	0.0455
Competency 12	1.97	0.718	2.04	0.784	0.2895
Competency 13	2.05	0.741	2.00	0.760	0.3635
Competency 14	1.67	0.784	1.87	0.810	0.0775
Competency 15	1.68	0.720	1.72	0.863	0.3975
Average Rating	**1.79**		**1.91**		

Table 18

One-Tailed Independent Samples Test for Criticality

	ATCs		ATEP Directors		Significance (p-value)
	Mean	Standard Deviation	Mean	Standard Deviation	
Competency 1	1.19	0.869	1.21	0.840	0.4615
Competency 2	0.91	0.721	0.74	0.738	0.0865
Competency 3	0.84	0.908	0.36	0.738	0.239
Competency 4	0.36	0.571	0.55	0.667	0.049
Competency 5	0.72	0.757	0.53	0.639	0.067
Competency 6	1.31	0.939	1.21	0.717	0.2405
Competency 7	1.18	0.904	1.00	0.734	0.0975
Competency 8	0.94	0.807	0.72	0.717	0.0475
Competency 9	1.09	0.905	1.04	0.733	0.359
Competency 10	2.14	0.847	2.21	0.689	0.303
Competency 11	1.98	0.897	2.21	0.743	0.059
Competency 12	1.88	0.895	1.91	0.766	0.418
Competency 13	1.51	0.935	1.34	0.807	0.1345
Competency 14	1.40	0.953	1.45	0.889	0.367
Competency 15	1.27	0.931	1.30	0.774	0.424
Average Rating	**1.25**		**1.19**		

Table 19

One-Tailed Independent Samples Test for Preparedness

	ATCs		ATEP Directors		Significance (p-value)
	Mean	Standard Deviation	Mean	Standard Deviation	
Competency 1	1.53	0.787	1.40	0.840	0.164
Competency 2	1.50	0.830	1.43	0.888	0.3285
Competency 3	1.69	0.902	1.53	0.868	0.144
Competency 4	1.27	0.906	1.06	0.949	0.09
Competency 5	1.10	0.728	1.06	0.864	0.3685
Competency 6	1.64	0.886	1.60	0.884	0.4165
Competency 7	1.39	0.952	1.53	0.868	0.1855
Competency 8	1.23	0.827	1.06	0.908	0.127
Competency 9	1.32	0.929	1.34	0.854	0.4455
Competency 10	1.99	0.823	2.23	0.724	0.0425
Competency 11	1.63	0.848	1.87	0.810	0.048
Competency 12	1.30	.949	1.64	0.857	0.0155
Competency 13	1.50	0.935	1.40	0.987	0.2665
Competency 14	1.15	0.878	1.45	0.972	0.0285
Competency 15	1.10	0.793	1.23	0.954	0.206
Average Rating	**1.42**		**1.46**		

APPENDICIES

Appendix A: Purpose of the study, significance of the study, research questions, research hypotheses, limitations, delimitations, definitions of terms, and assumptions

Appendix B: Annotated bibliography

Appendix C: IRB narrative and IRB approval letter

Appendix D: NATA, Inc. research/graduate study document: contact list request form, cover letter: undergraduate ATEP director, cover letter: clinically practicing ATC, follow-up letter: undergraduate ATEP director, follow-up letter: clinically practicing ATC, ATECQ: ATEP director, and ATECQ: clinically practicing ATC

APPENDIX A

Purpose of the Study

The primary purpose of this study was to evaluate undergraduate ATEP directors' and clinically practicing ATCs' perceptions of the fifteen Psychosocial Intervention and Referral competencies of the fourth edition of the *NATA Athletic Training Educational Competencies* manual (2006). Specifically, these competencies were rated on three variables: importance, criticality, and preparedness. In addition, this study evaluated the ATEP directors' and clinically practicing ATCs' ranking of the twelve content areas of the fourth edition of the *Athletic Training Educational Competencies* manual (2006). These were ranked on the same importance, criticality, and preparedness factors. Lastly, this study yielded demographic data of undergraduate ATEPs and clinically practicing ATCs in the U.S. to describe the current state of the psychosocial aspects in athletic training.

Significance of the Study

The benefits of understanding and implementing educational competencies within the field of athletic training have been well documented in the literature (Walker, Weidner, & Armstrong, 2008). In addition, the advantages of implementing psychological skills and strategies in sport, especially during rehabilitation, have been thoroughly discussed within recent literature (Arvinen-Barrow, Hemmings, Weigand, Becker, & Booth, 2007). However, there is a lack of substantial research concerning the Psychosocial Intervention and Referral content area, and the general implementation of psychological skills and techniques in athletic training. Furthermore, no research was found that examined undergraduate ATEP directors or clinically practicing ATCs and the established Psychosocial Intervention and Referral competencies in the fourth edition of the *NATA Athletic Training Educational Competencies* manual (2006).

Specifically, research has not focused on the Psychosocial Intervention and Referral competencies that are most often seen or utilized by practicing ATCs. Therefore, this content area of the *NATA Athletic Training Educational Competencies* manual (2006) was examined to identify what competencies ATEP directors and clinically practicing ATCs perceive to be most important and critical in the field of athletic training. Furthermore, this study was a significant step towards identifying what competencies clinically practicing ATCs feel most prepared to complete.

This study will be valuable to ATEP faculty and clinically practicing ATCs in educational strategies and opportunities they employ to effective learning in the classroom and clinical settings. Particularly, athletic training students will benefit from the increased emphasis in certain areas that ATEP directors and clinically practicing ATCs feel that are critical and important to the athletic training profession. By understanding the needs of ATCs and the critical and important competencies, athletic training students will hopefully be offered increased education and educational opportunities assuring a competitive advantage upon BOC certification. Moreover, this research provides a way to evaluate the *NATA Athletic Training Educational Competencies* manual (2006) of ATEP curriculums in the U.S. in accordance to NATA and CAATE requirements.

More importantly, the data gathered in this study will allow ATEPs to significantly focus on the "most" important and critical Psychosocial Intervention and Referral competencies. Hopefully, this will increase the time expended to instruct athletic training students in this subject matter and better prepare them as a minimally competent entry-level ATC. Overall, this study will be a significant endeavor in serving as a future reference for researchers on the subject of evaluating the *NATA Athletic Training Educational Competencies* manual (2006).

Furthermore, it will promote future research in this area of athletic training, examining the importance and criticality of the competencies and proficiencies in the remaining eleven content areas.

Research Questions

This research study will be based on the following research questions:

1.) How do undergraduate ATEP directors and clinically practicing ATCs rank each of the twelve content areas of the *NATA Athletic Training Educational Competencies* manual (2006) on importance, criticality, and preparedness?

2.) How do undergraduate ATEP directors and clinically practicing ATCs rate each of the fifteen Psychosocial Intervention and Referral competencies on importance, criticality, and preparedness?

3.) Do undergraduate ATEP directors and clinically practicing ATCs rate the Psychosocial Intervention and Referral content area similarly on the variables of importance, criticality, and preparedness?

4.) Will clinically practicing ATCs and undergraduate ATEP directors rank the Psychosocial Intervention & Referral content area below 50% of the other NATA athletic training educational content areas?

Research Hypotheses

This research study will be based on the following hypotheses:

H_{1O}: No significant difference will be found between ATEP directors' and ATCs' ratings of importance and criticality on each of the competencies within the Psychosocial Intervention and Referral content area.

H_{1A}: ATCs will rate several competencies within the Psychosocial Intervention and Referral content area as more important and critical than ATEP directors.

H_{2O}: No significant difference will be found between ATEP directors' and ATCs' ratings of preparedness on each of the competencies within the Psychosocial Intervention and Referral content area.

H_{2A}: ATCs will rate several competencies within the Psychosocial Intervention and Referral content area as less prepared than ATEP directors.

Limitations

This research study will be limited by the following:

1.) All questionnaires may not be completed and returned.

2.) Results may not be generalized to all undergraduate ATEP curriculums.

3.) The time limit set for participants to complete questionnaire.

4.) The omission of a mid-point on the Likert-scale.

Delimitations

This research study will be delimited by the following:

1.) The content of the questionnaire was solely developed for this study.
2.) The preparedness scale was specifically designed for this study.
3.) Only undergraduate ATEP directors were selected to participate in this study.
4.) Only clinically practicing ATCs that are members of the NATA were selected to participate in this study.
5.) Only clinically practicing ATCs in the high school, high school/clinic, college student, junior college, and college/university were selected to participate in this study.
6.) The sample of undergraduate ATEP directors was chosen by convenience/deliberate sampling.
7.) The sample of clinically practicing ATCs was chosen through the NATA contact list request form.

Definitions of Terms

The research study will use the following terms according to these definitions:

1.) Undergraduate ATEP Directors – those individuals who presently coordinate the undergraduate ATEP curriculum at the institution in which they are currently employed, and are recorded as the program director on the CAATE website.
2.) Clinically Practicing ATCs – those individuals who are at least employed in a clinical athletic training site, either part-time or full-time, who may also be employed in an

educator or student role, including; college student, high school, high school/clinic, junior college, and university/college.

3.) Importance – Importance is deemed as the degree to which knowledge and competence in the content area or competency is essential to the job performance of a minimally competent ATC.

4.) Criticality – Criticality is defined as the degree to which adverse effects could result if the ATC is not competent in a content area or competency.

5.) Preparedness – Preparedness is defined as the degree to which a minimally competent ATC perceives to be prepared in each educational content area or competency.

Assumptions

The following assumptions will be made:

1.) Questionnaires were answered honestly and completely by the undergraduate ATEP directors.

2.) Questionnaires were answered honestly and completely by clinically practicing ATCs.

3.) Clinically practicing ATCs responded to the ATECQ as they would have when they were initially certified.

4.) ATEP directors and clinically practicing ATCs reviewed the list of definitions before completing the ATECQ.

5.) ATEP directors are those individuals that were, in fact, completing the ATECQ.

6.) Clinically practicing ATCs are BOC certified and possess the necessary skills to practice as a professional athletic trainer.

APPENDIX B

ANNOTATED BIBLIOGRAPHY

Arvinen-Barrow, M., Hemmings, B., Becker, C.A., & Booth, L. (2008). Sport psychology education: A preliminary survey on chartered physiotherapists' preferred methods of training delivery.

The authors' objective of this study was to gather suggestions and recommendations of chartered physiotherapists' preferred methods of training delivery in the subject of sport psychology. Twenty-two participants from two annual conferences in 2006 completed a questionnaire surveying the best method of sport psychology delivery. This survey was specifically developed for the purpose of this study. Results showed that most suitable methods of delivering sport psychology to chartered physiotherapists were workshops, seminars, mentoring, and coaching. In addition, physiotherapists stated that they would prefer those delivery methods in the form of intense training days and/or weekends. Overall, this study allows us to view suggestions into how further training in sport psychology can be accomplished. This study is appropriate to review in order to identify how individuals want to be trained, giving a possible reason why training in sport psychology is not emphasized in education programs today. The data from this study allowed me to further question why there is a lack of training in sport psychology in education programs, and if this type of training could be instituted into physiotherapy and/or athletic training program curricula.

Arvinen-Barrow, M., Hemmings, B., Weigand, D., Becker, C.A., & Booth, L. (2007). Views of chartered physiotherapists on the psychological content of their practice: A follow-up survey in the UK. *Journal of Sport Rehabilitation, 16*, 111-121.

The authors of this study aimed to assess chartered physiotherapists views of the psychological content in their practice. A national survey was used to collect data. It was found that athletes were affected by psychological situations more than 80% of the time when injured. Physiotherapists reported that they need additional training in this area to effectively treat their athletes. Most physiotherapists, like athletic trainers, do not have access to a sport psychologist in order to aid in the recovery process. This study suggests that most physiotherapists are aware of psychological aspects during injury, and understand it is important to treat these psychological conditions. This study allowed me to view the opinions of healthcare professionals outside the U.S. on the issue of psychosocial intervention and referral. In addition, it gave me a firm base of knowledge to argue for the increased need of psychological intervention and referral educational needs.

Board of Certification. (2004). *Certainty in the Professional Practice of Athletic Trainers: Role Delineation Study* (5th Ed.) Omaha, NE: National Athletic Trainers' Association Board of Certification, Inc.

The BOC is the body that protects the public by identifying individuals who are competent to practice the profession of athletic training. This accrediting body developed the certification exam for athletic trainers to ensure that all individuals that pass the exam are equally competent in the discipline of athletic training and understand the role of an athletic trainer. To create this examination, the BOC completed a role delineation study. This consisted of three

processes: 1) a panel of experts defining the essential domains of the profession of athletic training, 2) asking a sample of ATCs to review and validate these domains, and 3) developing test specifications for the certification examination. From this study, the BOC identified the amount of questions from each domain and the subject matter that will appear on the certification examination. This publication provides detail into the specific findings of each phase of the study, and aids in the formulation of the questionnaire of the present study. Instead of examining the domains of athletic training, the current study examines the athletic training educational competencies in which undergraduate ATEPs use to educate entry-level athletic trainers. Furthermore, the role delineation study assists in the composition of the dependent variables as well as the validity and reliability of the survey scale.

Cramer Roh, J.L. & Perna, F.M. (2000). Psychology/counseling: A universal competency in athletic training. *Journal of Athletic Training*, *35*(4), 458-465.

The objective of this research article was to present a rationale that ATCs may need structured educational training in the psychological aspects of athletic injury. The authors searched multiple databases for information pertaining to psychological distress, depression, athletic injury, and rehabilitation adherence. Evidence from the articles found illustrates that psychological factors are significant predictors of athletic injury. Furthermore, it was stated that athletic injury is accompanied by psychological factors and that some data suggests that ATCs may lack training in this competency area. This article is very valuable because it illustrates many educational and training implications for ATCs. It also provides evidence to support the fact that this content area of athletic training education and clinical practice is often overlooked by ATCs, which should be increased to enhance the effectiveness of ATCs as allied health care professionals.

Delforge, G.D. & Behnke, R.S. (1999). The history and evolution of athletic training education in the United States. *Journal of Athletic Training, 34*(1), 53-61.

The authors presented a chronological review of the history of athletic training in the U.S. Through this history, the article focused on the professional growth of athletic training and the NATA. Specifically, Delforge and Behnke discussed how the NATA aided in the development of athletic training education. In addition, the credentialing of athletic trainers, the recognition of athletic training as a healthcare provider by the NATA, and the accreditation of undergraduate ATEPs were discussed. This article allowed me to review the history and evolution of athletic training and understand "the relationships among education, credentialing of practitioners, and professionalism in athletic training" (pg. 53). By understanding the educational background, I was able to see the emphasis placed on subject matter through clinical experience, as well as how and why the *Athletic Training Educational Competencies* emerged. This helps me to support my desire to increase clinical experiences in psychosocial intervention and referral.

Donahue, M. (2009). Athletic trainers' perceptions of the importance, preparation and time spent in the athletic training content areas. *Athletic Training Education Journal, 4*(3), 88-97.

Those individuals that are graduates of accredited athletic training education programs are expected to be minimally competent and proficient in all of the athletic training educational content areas. The author of this study wanted to determine what perceptions athletic trainers have of the athletic training educational content areas in the NATAs' six largest employment categories. To do this, Donahue mailed a survey instrument to athletic trainers practicing in these employment settings. Through this survey, the participants were asked to rate the athletic training content areas based on "importance for successful practice, time on task, importance for

patient care, educational preparation, and educational emphasis" (pg. 88). The results showed that each group of athletic trainers significantly agreed on the ratings of the content areas, except relating to time and importance for success. This research study has allowed me to recognize how athletic trainers perceive the importance, preparation, and time spent in each of the athletic training educational content areas. I will be able to use this information as a source to compare the responses I receive in how athletic trainers rank the educational content areas.

Fisher, A.C., Mullins, S.A., & Frye, P.A. (1993). Athletic trainers' attitudes and judgments of injured athletes' rehabilitation adherence. *Journal of Athletic Training*, *28*(1), 43-47.

For this study, the authors questioned ATCs of the NATA to decipher their attitudes and judgments of how ATCs, as a whole, work within the sport injury rehabilitation experience. Specifically, ATCs' attitudes and judgments of rehabilitation adherence were examined through gender, experience differences, and successful and unsuccessful adherence strategies. Fisher, Mullins, and Frye used a seven scale questionnaire consisting of athletic trainer's influence, environmental influences, athlete's personality, pain tolerance, self-motivation, goals and incentives, and significant others. This allowed me to realize what ATCs viewed as the most important aspect of athletes' rehabilitation adherence. It also shed light on what areas ATCs truly thought influenced athletes during rehabilitation. Most of these items are psychologically related in which ATCs could use psychosocial interventions in order to increase athletes' rehabilitation adherence.

Gordon, S., Potter, M., & Ford, IW. (1998). Toward a psychoeducational curriculum for training sport-injury rehabilitation personnel. *Journal of Applied Sport Psychology, 10*, 140-156.

Gordon, Potter, and Ford addressed the issues of training programs for sport-injury personnel in using psychological skills and strategies. The authors' aim was for consideration of a psychoeducational curriculum for those that work with injured athletes. Five intervention studies were analyzed to provide support for the benefits of using psychological skills and strategies in sport-injury rehabilitation. Both physiotherapists and athletic trainers were concerned with their ability to effectively implement these skills in practice. Therefore, it was emphasized that more in-depth training is required. This article is a valuable tool to increase support for my study and the implications for increasing psychosocial intervention and referral education. In addition, it allows me to argue that if chartered physiotherapists and ATCs do not feel confident in implementing psychological skills then there should be an increase in education in this area. Therefore, increased content material needs to be established in order for athletic trainers to feel competent in implementing psychological techniques in sport-injury rehabilitation.

Hamson-Utley, J.J., Martin, S., & Walters, J. (2008). Athletic trainers' and physical therapists' perceptions of the effectiveness of psychological skills within sport injury rehabilitation programs. *Journal of Athletic Training, 43*(3), 258-264.

Through this study the authors wanted to examine how athletic trainers and physical therapists viewed the effectiveness of psychological skills in rehabilitation. It is thought that psychological skills are used to aid in sport injury rehabilitation. However, it was found that the implementation of these skills is limited. Both athletic trainers and physical therapists held

positive attitudes about the use and effectiveness of psychological skills, with more athletic trainers compared to physical therapists. Lastly, psychological skills were found to increase adherence rates and recovery time. This study allowed me to understand how athletic trainers and physical therapists perceive psychology during rehabilitation. It was found that athletic trainers used some of the skills during treatment. It is still questioned, though, if these skills are taught through ATEPs or learned through practicing in the field. Lastly, it showed positive responses in the use of these skills, but did not state that formal training was involved, and, if so, when and how it was taught which allows my study to be relevant with this literature.

Harris, L.L., Demb, A., & Pastore, D.L. (2004). Perceptions and attitudes of athletic training students toward a course addressing psychological issues in rehabilitation. *Journal of Allied Health, 34*(2), 101-109.

In this study the authors examined ATCs' perceptions and attitudes before and after going through a course addressing psychological issues in rehabilitation. Nineteen students were enrolled in a course addressing psychological issues in rehabilitation, and completed a Likert-scale survey before and after the course. In addition, interviews were completed before and after the course to establish the amount of information retained. Results of the Likert-scale questionnaire showed that athletic trainers were able to recognize psychological distress from injury which also increased the stress of the individual. Interview results showed that athletic trainers need to understand the student-athlete more to help them psychosocially. The athletic training students' perceptions in this study allowed me to understand how they felt about this aspect of athletic training instead of reviewing current ATCs. It also had a valuable comparison with other literature and stated how ATCs need this education if they want to help an athlete fully recover. This study provides a base and direction of how to structure my study.

Hemmings, B. & Povey, L. (2002). Views of chartered physiotherapists on the psychological content of their practice: A preliminary study in the United Kingdom. *British Journal of Sports Medicine, 36*, 61-64.

In this article, Hemmings and Povey investigated the perceptions of English chartered physiotherapists on the psychological content of their practice. The authors utilized the Physiotherapist and Sport Psychology Questionnaire (PSPQ) which was adapted to this study from the Athletic Trainer and Sport Psychology Questionnaire (ATSPQ). This questionnaire was mailed out to 179 chartered physiotherapists. Results from this study showed that physiotherapists believed that athletes are psychologically affected by injury. In addition, the participants reported using psychological techniques when treating athletes, but few reported having access to a sport psychologist for referral. This article is a valuable tool for me because it adds information from other countries that are realizing the same difficulty in treating athletic injuries as in the U.S. Furthermore, this research indicates that future education should have an emphasis on the psychological aspect of injury, as well as an increase in knowledge of psychological interventions.

Lafferty, M.E., Kenyon, R., & Wright, C.J. (2008). Club-based and non-club-based physiotherapists' views on the psychological content of their practice when treating sports injuries. *Research in Sports Medicine, 16*, 295-306.

This research study was aimed to explore the differences in the psychological content of practice between club-based and non-club-based contracted physiotherapists in the United Kingdom. The main area of focus was how these physiotherapists practiced psychological techniques and strategies when treating sports injuries. A modified version of the Athletic

Training and Sport Psychology Questionnaire (ATSPQ) was used to collect data in this study. Many differences were found between the two groups within this study. The information from this study could be applied in the U.S. to discover differences between ATCs and other sports medicine professionals in the psychological content. The results of this study provide additional support for why sport psychology should be incorporated into athletic training curricula.

Larson, G.A., Starkey, C., & Zaichkowsky, L.D. (1996). Psychological aspects of athletic injuries as perceived by athletic trainers. *The Sport Psychologist, 10*(1), 37-47.

This study investigated the perceptions of ATCs toward psychological aspects, including strategies and techniques, of athletic injuries. The Athletic Training and Sport Psychology Questionnaire (ATSPQ) was developed for the purpose of this study which collected data from ATCs on issues related to sport psychology in the field of athletic training. A random sample of ATCs from the NATA responded to the questionnaire. The data collected from this study illustrated that future education of athletic trainers should address the psychological aspects of injury treatment. Furthermore, it is suggested that a sport psychology referral network should be established within each athletic training room. This article produced multiple data that demonstrates a need for an increased look at why sport psychology is not emphasized in athletic training education programs. It further provides the needed support too review the *Athletic Training Educational Competencies*, especially the Psychosocial Intervention and Referral content area.

Mann, B.J., Grana, W.A., Indelicato, P.A., O'Neill, D.F., & George, S.Z. (2007). A survey of sports medicine physicians regarding psychological issues in patient-athletes. *The American Journal of Sports Medicine, 35*, 2140-2147.

The author's purpose of this study was to discuss how often sports medicine physicians encountered psychological issues among patient athletes. In addition, Mann et al. evaluated physicians' perceptions of how available sport psychologists and other mental health professionals were in aiding in the treatment of patient athletes. The authors employed an electronic survey through a cross-sectional study to physicians of four prominent sports medicine associations. The data of this study identified many results in how the physician respondents discussed psychological issues with athletes. Overall, sports medicine physicians rarely encounter psychological issues with patient athletes. This research study allowed me to view another individual of the sports medicine team and how they respond to psychological issues with patient athletes. In addition, this study reinforced the idea of having athletic trainers become aware of multiple psychological issues that they may encounter with athletes in order for them to treat this aspect before referring them to another health care provider. Furthermore, since sports medicine physicians rarely discuss these issues with athletes, other sports medicine personnel, like athletic trainers, should be well versed in this area in order to aid in the athletes total recovery.

National Athletic Trainers' Association. (2006). *Athletic Training Educational Competencies* (4th Ed.). Dallas, TX: National Athletic Trainers' Association.

The NATA devised the *Athletic Training Educational Competencies* to structure the didactic and clinical education experience for undergraduate athletic training students. There are

twelve content areas in this manual that undergraduate athletic training students must become proficient in when preparing for a career in athletic training. This publication is constantly being revised in order to withhold the knowledge and skills of the current knowledge and practice. Through this, the NATA offers educational program personnel the knowledge and skills to be mastered by athletic training students in their ATEPs. This manual is a valuable tool for undergraduate ATEP faculty to structure program curriculum in athletic training, and as a self-study guide for athletic training students preparing to enter the field of athletic training. The *Athletic Training Educational Competencies* allows for the direction and completion of the survey for this study.

Robbins, J.E. & Rosenfeld, L.B. (2001). Athletes' perceptions of social support provided by their head coach, assistant coach, and athletic trainer, pre-injury and during rehabilitation. *Journal of Sport Behavior, 24*(3), 277-297.

In this article Robbins and Rosenfeld assessed the athletes' perceptions of social support provided by their head coach, assistant coach, and athletic trainer, pre-injury and during rehabilitation. Data was collected quantitatively on who provided social support and what kind, how satisfied the athletes were with this support, and how they felt this support affected their well-being. Results showed a significant difference between the support provided by the head coach, assistant coach, and athletic trainer. Most support was perceived to come from athletic trainers, and most athletes were satisfied with this support. This distinction between social support providers revealed how much impact an athletic trainer has on an athlete before and during rehabilitation. Furthermore, it is the athletic trainer that the athletes want to provide psychosocial intervention pre-injury, during rehabilitation, and post-injury.

Schellhase, K.C. (2008). Applying mastery learning to athletic training education. *Athletic Training Education Journal, 3*(4), 130-134.

The author of this article compared current athletic training education to the mastery learning theory. It focused mostly on how mastery learning is the functional foundation and instructional model of athletic training education. In addition, Schellhase evaluated her hypothesis of how this model of learning correlated with current ATEPs. The article spends most of its time discussing what mastery learning is and the evolution of athletic training. Conclusions of this article showed that mastery learning did set a strong foundation for athletic training education. This article allowed me to review the history and evolution of athletic training to its present structure. It is a great adjunct to the article by Delforge and Behnke that discussed the history and evolution of athletic training education because it includes information up to the year 2008. Lastly, it makes mention of the fact that students must master their material and skills, not just be exposed to it. This quality of education is not seen in all twelve content areas, especially Psychosocial Intervention and Referral.

Scherzer, C.B. & Williams, J.M. (2008). Bringing sport psychology into the athletic training room. *Athletic Therapy Today, 13*(3), 15-17.

Scherzer and Williams produced this article to illustrate the need to integrate the practice of sport psychology into the athletic training room. Therefore, multiple suggestions for the integration of sport psychology and athletic training are discussed. It was found through this study that when athletic trainers were given the opportunity to learn about sport psychology rehabilitation interventions, they found it too time consuming. Overall, the NATA realizes the need for ATCs to possess the knowledge and skills in the area of sport psychology, but

individual ATCs report that there is not a beneficial and time efficient way to teach this information. This article is important due to the information it provides about the reasons why ATCs do not participate in psychological skills training programs.

Stiller-Ostrowski, J.L, Gould, D.R., & Covassin, T. (2009). An evaluation of an educational intervention in psychology of injury for athletic training students. *Journal of Athletic Training*, *44*(5), 482-489.

One of the twelve content areas in athletic training education programs is Psychosocial Intervention and Referral. The objective of this study was to evaluate the effectiveness of an education intervention in order to potentially increase psychology of injury knowledge and skills by athletic training students. Participants completed the Applied Sport Psychology for Athletic Trainers educational intervention, with knowledge tests and skill usage surveys administered at multiple times during the intervention. It was found that the Applied Sport Psychology for Athletic Trainers educational intervention increased psychology of injury knowledge and skill usage in athletic training students. Overall, psychology of injury knowledge and skill usage decreased at the end of the retention period but was still higher than the baseline tests. This study forms a basic argument for this type of education in psychosocial intervention and referral. It illustrates that this type of education should be established in the undergraduate ATEP curriculums in order for undergraduate athletic training students to become competent. Workshops, continuing education units, seminars, or intense courses such as the one in this study are not effective in the retention of knowledge to effectively implement the skills and knowledge in the field of athletic training.

Stiller-Ostrowski, J.L & Ostrowski, J.A. (2009). Recently certified athletic trainers' undergraduate educational preparation in psychosocial intervention and referral. *Journal of Athletic Training, 44*(1), 67-75.

The NATA Education Council established twelve content areas required to be taught in athletic training education programs, and one of these content areas is Psychosocial Intervention and Referral. It was the authors' objective to explore the preparation of recently certified athletic trainers within this content area. To do this, the authors employed a qualitative approach through semi-structured interviews. It was found that ATEPs do prepare athletic trainers for some issues related to this content area. However, athletic trainers feel underprepared to deal with athlete-related issues using psychological skills and strategies. This study by Stiller-Ostrowski and Ostrowski forms the base of my research study. Instead of a qualitative study with recently certified athletic trainers, I will be focusing on clinically practicing ATCs and undergraduate ATEP directors in a quantitative study. It is stated that athletic training students report being less proficient in this area and one way to examine why is to survey these individuals that have completed an undergraduate ATEP curriculum and those individuals that structure these programs. This will add to the body of knowledge in order to effectively restructure athletic training education.

Tracey, J. (2008). Inside the clinic: Health professionals' role in their clients' psychological rehabilitation. *Journal of Sport Rehabilitation, 17*, 413-431.

Health professionals play an integral role in the psychological recovery from sport-related injury. In this study, Tracey examined health professionals' ideas of their role during the psychological recovery of an athlete. After analyzing the data, three general-dimensions were

established. Most health professionals perceived they play a significant role in the psychological recovery of an athlete, however, they felt that they had a lack of training in psychology skills and strategies. Due to this lack of education, health professionals are interested in learning more psychological techniques and how to implement them during the rehabilitation process. This will allow them to better aid in the recovery process for their clients. The information in this study aids to the fact that health professionals, including athletic trainers, lack knowledge and training of psychological skills and strategies, and their application. It is recommended that more education in this area needs to be established. By looking at ATEPs in my study, it will aid to increasing the knowledge and content in the area of Psychosocial Intervention and Referral within these curriculum programs.

Walker, S.E., Weidner, T.G., & Armstrong, K.J. (2008). Evaluation of athletic training students' clinical proficiencies. *Journal of Athletic Training, 43*(4), 386-395.

In this study, Walker, Weidner and Armstrong discussed the common methods undergraduate ATEPs used to evaluate athletic training students' clinical proficiencies. These authors found that there are three methods of evaluation; real-time, simulation, and standardized patients. It was stated that most real-time evaluations were seen in high school and collegiate athletic training settings. In addition, this study discussed program directors' views of how the educational content areas were covered by their program's clinical proficiency evaluations. Results showed that ATEPs should use standardized patients or simulations in clinical proficiency instruction and evaluation when real-time situations are not available. Additionally, this study showed that ATEPs are competency-based, but not all content areas are covered thoroughly. Furthermore, it showed that the Psychosocial Intervention and Referral educational

content area was one of the lowest areas covered. Therefore, there is a need to improve and increase the clinical experiences and education in this educational content area.

Weidner, T.G. & Henning, J.M. (2002). Historical perspective of athletic training clinical education. *Journal of Athletic Training, 37*(4 Supplement), S-222-S-228.

Weidner and Henning presented a historical perspective of athletic training education in its development and evolution. The authors completed this article in order for allied health professionals, especially athletic trainers, to gain a better understanding of the clinical education structure, and what is needed in clinical education today and in the future. It was found that clinical education, in general, evolved from a didactic process to a clerkship model, but athletic training has been based more on clinical experiences. I have used this study to learn and appreciate the history and evolution of athletic training clinical education. Even though I am not directly studying athletic training education as a whole, the Psychosocial Intervention and Referral content area that should be practiced and mastered by athletic training students during clinical educational experiences is examined.

Weidner, T.G., Noble, G.L., & Pipkin, J.B. (2006). Athletic training students in the college/university setting and the scope of clinical education. *Journal of Athletic Training, 41*(4), 422-426.

Weidner, Noble and Pipkin discussed the perceptions' of athletic training students in the type and amount of clinical supervision they received during clinical education experiences. It is stated that there must be the proper type and amount of clinical supervision in ATEPs so that athletic training students meet and obtain all requirements for the BOC examination. Overall, there was a significant difference between the amounts of supervision of sophomore students

compared to senior students in that senior students were less supervised than sophomore students. Through this study it is shown that athletic training students do not receive the appropriate clinical supervision, thus, they act outside their scope of practice. This study allowed me to realize that there is a lack of supervision during clinical experiences. Therefore, students are not being exposed to the content material at their clinical sites and are not mastering the psychomotor skills. This is seen with a desire to be educated with an increase in clinical experiences with psychosocial intervention and referral.

Wiese, D.M., Weiss, M.R., & Yukelson, D.P. (1991). Sport psychology in the training room: A survey of athletic trainers. *The Sport Psychologist, 5*, 15-24.

The authors of this study surveyed the application of psychological principles of athletic trainers with injured athletes. This article collected data from athletic trainers based on a Likert scale on three different levels. It was revealed that athletic trainers felt that many psychological principles and skills are important during a rehabilitation program. Most of these strategies are best employed when a sport psychologist and athletic trainer work together. The authors also stated three reasons why athletic trainers may not use these skills and strategies, and that athletic trainers need to be more educated in this area. This study is a valuable tool in order to understand what athletic trainers feel about the use of psychological skills and strategies. It also suggests reasons why athletic trainers may not want to use these skills and strategies allowing for potential improvements in these educational areas.

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

Georgia Southern University
Office of Research Services & Sponsored Programs

Institutional Review Board (IRB)

Phone: 912-478-0843
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Veazey Hall 2021
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To: Brian D. Seiler
P.O. Box 8076

Noah B. Gentner
Jonathan N. Metzler
Barry Joyner
Susie Wehring
P.O. Box 8076

CC: Charles E. Patterson
Associate Vice President for Research

From: Office of Research Services and Sponsored Programs
Administrative Support Office for Research Oversight Committees
(IACUC/IBC/IRB)

Date: January 7, 2010

Subject: Status of Application for Approval to Utilize Human Subjects in Research

After a review of your proposed research project numbered **H10130** and titled **"ATEP Directors' and ATCs' Perceptions of the Psychosocial Intervention and Referral Competencies"**, it appears that (1) the research subjects are at minimal risk, (2) appropriate safeguards are planned, and (3) the research activities involve only procedures which are allowable.

Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that the Institutional Review Board has approved your proposed research.

This IRB approval is in effect for one year from the date of this letter. If at the end of that time, there have been no changes to the research protocol; you may request an extension of the approval period for an additional year. In the interim, please provide the IRB with any information concerning any significant adverse event, **whether or not it is believed to be related to the study**, within five working days of the event. In addition, if a change or modification of the approved methodology becomes necessary, you must notify the IRB Coordinator **prior** to initiating any such changes or modifications. At that time, an amended application for IRB approval may be submitted. Upon completion of your data collection, you are required to complete a *Research Study Termination* form to notify the IRB Coordinator, so your file may be closed.

Sincerely,

Eleanor Haynes

Eleanor Haynes
Compliance Officer

APPENDIX D

COVER LETTER: UNDERGRADUATE ATEP DIRECTORS

Dear Undergraduate ATEP Director:

I am a Master's degree candidate at Georgia Southern University, requesting your help to complete part of my degree requirements. Please follow the link at the end of this letter to an online questionnaire titled: Athletic Training Educational Competency Questionnaire.

The questionnaire consists of nineteen demographic questions, three ranking sections based on a range from one through twelve, and three rating sections based on a four-point Likert-scale (0-3). The survey should take about fifteen minutes to complete.

The program directors of the three hundred forty six CAATE accredited undergraduate athletic training programs across the United States are being asked to complete this questionnaire, but you have the right to choose not to participate. The Georgia Southern University Institutional Review Board has approved this study for the Protection of Human Subjects.

This is a completely anonymous questionnaire and upon submission, neither your name nor e-mail address will be attached to your answers. Your information will be kept strictly confidential. Therefore, the risks to you as a participant or your program are extremely minimal. There are no "right" or "wrong" answers and we ask you to answer all questions to the best of your ability.

As an undergraduate ATEP director, your knowledge and opinions regarding this topic makes your input invaluable. Please take a few minutes to fill out the anonymous questionnaire you will find by clicking on the link below. All questionnaires are asked to be filled out and submitted within a five-week time period.

Please open the attachment below to review the definitions of the terms used in the Athletic Training Educational Competency Questionnaire before following the link to complete the questionnaire.

Questionnaire Link: http://www.surveymonkey.com/s/PRR8P6F

Your knowledge and opinions regarding this topic are much appreciated and will help to strengthen our profession. If you have any questions about this research study, please contact the primary investigator at (412) 759-2808 or brian_d_seiler@georgiasouthern.edu.

Thank you for your time and consideration.

Sincerely,
Brian D. Seiler, ATC, LAT
Georgia Southern University
(412) 759-2808
Brian_d_seiler@georgiasouthern.edu

COVER LETTER: CLINICALLY PRACTICING ATCS

Dear Fellow Certified Athletic Trainer:

I am a Master's degree candidate at Georgia Southern University, requesting your help to complete part of my degree requirements. Please follow the link at the end of this letter to an online questionnaire titled: Athletic Training Educational Competency Questionnaire.

The questionnaire consists of seventeen demographic questions, three ranking sections based on a range from one through twelve, and three rating sections based on a four-point Likert-scale (0-3). The survey should take about fifteen minutes to complete.

One thousand practicing certified athletic trainers across the United States are being asked to complete this questionnaire, but you have the right to choose not to participate. The Georgia Southern University Institutional Review Board has approved this study for the Protection of Human Subjects.

This is a completely anonymous questionnaire and upon submission, neither your name nor e-mail address will be attached to your answers. Your information will be kept strictly confidential. Therefore, the risks to you as a participant or your program are extremely minimal. There are no "right" or "wrong" answers and we ask you to answer all questions to the best of your ability.

As an ATC, your knowledge and opinions regarding this topic makes your input invaluable. Please take a few minutes to fill out the anonymous questionnaire you will find by clicking on the link below. All questionnaires are asked to be filled out and submitted within a five-week time period.

Please review the definitions of the terms used in the Athletic Training Educational Competency Questionnaire at the bottom of this e-mail before following the link to complete the questionnaire.

Questionnaire Link: http://www.surveymonkey.com/s/DHY6JGH

Your knowledge and opinions regarding this topic are much appreciated and will help to strengthen our profession. If you have any questions about this research study, please contact the primary investigator at (412) 759-2808 or brian_d_seiler@georgiasouthern.edu.

Thank you for your time and consideration.

Sincerely,
Brian D. Seiler, ATC, LAT
Georgia Southern University
(412) 759-2808
Brian_d_seiler@georgiasouthern.edu

Participants for this survey were selected at random from the NATA membership database according to the selection criteria provided by the student doing the survey. This student survey is not approved or endorsed by NATA. It is being sent to you because of NATA's commitment to athletic training education and research.

Athletic Training Educational Questionnaire
Definitions of Terms

Risk Management and Injury Prevention: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of risk management and injury prevention and demonstrate the necessary skills to plan and implement prevention strategies.

Pathology of Injuries and Illnesses: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of the cellular events and reactions and other pathological mechanisms in the development, progression and epidemiology of injuries and illnesses.

Orthopedic Clinical Examination and Diagnosis: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess the ability to clinically examine and diagnose a patient for the purpose of identifying (a) common acquired or congenital risk factors that would predispose the patient to injury, and (b) musculoskeletal orthopedic injuries to determine proper care including the referral of the patient to other health care providers when appropriate.

Medical Conditions and Disabilities: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of medical conditions and disabilities associated with physically active individuals.

Acute Care of Injuries and Illnesses: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must recognize, assess, and treat patients with acute injuries and illnesses and provide appropriate medical referral.

Therapeutic Modalities: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must plan, implement, document, and evaluate the efficacy of therapeutic modalities in the treatment of injuries to and illnesses of their patients.

Conditioning and Rehabilitative Exercise: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the

ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must plan, implement, document, and evaluate the efficacy of therapeutic exercise programs for the rehabilitation and reconditioning of injuries and illnesses.

Pharmacology: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of pharmacologic applications and governing pharmacy regulations relevant to the treatment of injuries, illnesses, and diseases.

Psychosocial Intervention and Referral: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess the ability to recognize, intervene, and refer when appropriate patients exhibiting sociocultural, mental, emotional, and psychological behavioral problems/issues.

Nutritional Aspects of Injuries and Illnesses: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of the nutritional aspects of injuries and illnesses.

Health Care Administration: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess the knowledge and skills to develop, administer, and manage a health care facility and associated venues that provide health care to athletes and others involved in physical activity.

Professional Development and Responsibility: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess the knowledge and skills to understand professional responsibilities and avenues of professional development to promote athletic training as a professional discipline.

Importance: Importance is deemed as the degree to which knowledge and competence in the content area is essential to the job performance of a minimally competent ATC.

Criticality: Criticality is defined as the degree to which adverse effects could result if the ATC is not competent in a content area.

Preparedness: Preparedness is defined as the degree to which a minimally competent ATC perceives to be prepared in all competencies of each educational content area.

FOLLOW-UP LETTER: UNDERGRADUATE ATEP DIRECTORS

Dear Undergraduate Program Director:

This is a follow-up letter as a reminder that I am requesting your help to complete part of my degree requirements as a Master's degree candidate at Georgia Southern University. Please disregard this e-mail if you have previously completed the questionnaire. If you have not completed the Athletic Training Educational Competency Questionnaire, you are urged to do so.

Two weeks have approximately elapsed since the initiation of my data collection. The data collection period will end in approximately three weeks. Please follow the link at the end of this letter to an online questionnaire titled: Athletic Training Educational Competency Questionnaire.

The questionnaire consists of nineteen demographic questions, three ranking sections based on a range from one through twelve, and three rating sections based on a four-point Likert-scale (0-3). The survey should take about fifteen minutes to complete.

Just as a reminder, this is a completely anonymous questionnaire and upon submission, neither your name nor e-mail address will be attached to your answers. Your information will be kept strictly confidential. Therefore, the risks to you as a participant or your program are extremely minimal. There are no "right" or "wrong" answers and we ask you to answer all questions to the best of your ability.

As an undergraduate ATEP director, your knowledge and opinions regarding this topic makes your input invaluable. Please take a few minutes to fill out the anonymous questionnaire you will find by clicking on the link below. All questionnaires are asked to be filled out and submitted within a five-week time period.

Please open the attachment to review the definitions of the terms used in the Athletic Training Educational Competency Questionnaire before following the link to complete the questionnaire.

Questionnaire Link: http://www.surveymonkey.com/s/PRR8P6F

Your knowledge and opinions regarding this topic are much appreciated and will help to strengthen our profession. If you have any questions about this research study, please contact the primary investigator at (412) 759-2808 or brian_d_seiler@georgiasouthern.edu.

Thank you for your time and consideration.

Sincerely,
Brian D. Seiler, ATC, LAT
Georgia Southern University
(412) 759-2808
Brian_d_seiler@georgiasouthern.edu

FOLLOW-UP LETTER: CLINICALLY PRACTICING ATCS

Dear Fellow Certified Athletic Trainer:

This is a follow-up letter as a reminder that I am requesting your help to complete part of my degree requirements as a Master's degree candidate at Georgia Southern University. Please disregard this e-mail if you have previously completed the Athletic Training Educational Competency Questionnaire. If you have not completed the questionnaire, you are urged to do so.

Two weeks have approximately elapsed since the initiation of my data collection. The data collection period will end in approximately three weeks. Please follow the link at the end of this letter to an online questionnaire titled: Athletic Training Educational Competency Questionnaire.

The questionnaire consists of seventeen demographic questions, three ranking sections based on a range from one through twelve, and three rating sections based on a four-point Likert-scale (0-3). The survey should take about fifteen minutes to complete.

Just as a reminder, this is a completely anonymous questionnaire and upon submission, neither your name nor e-mail address will be attached to your answers. Your information will be kept strictly confidential. Therefore, the risks to you as a participant or your program are extremely minimal. There are no "right" or "wrong" answers and we ask you to answer all questions to the best of your ability.

As an ATC, your knowledge and opinions regarding this topic makes your input invaluable. Please take a few minutes to fill out the anonymous questionnaire you will find by clicking on the link below. All questionnaires are asked to be filled out and submitted within a five-week time period.

Please review the definitions of the terms used in the Athletic Training Educational Competency Questionnaire at the bottom of this e-mail before following the link to complete the questionnaire.

Questionnaire Link: http://www.surveymonkey.com/s/DHY6JGH

Your knowledge and opinions regarding this topic are much appreciated and will help to strengthen our profession. If you have any questions about this research study, please contact the primary investigator at (412) 759-2808 or brian_d_seiler@georgiasouthern.edu.

Thank you for your time and consideration.

Sincerely,
Brian D. Seiler, ATC, LAT
Georgia Southern University
(412) 759-2808
Brian_d_seiler@georgiasouthern.edu

Participants for this survey were selected at random from the NATA membership database according to the selection criteria provided by the student doing the survey. This student survey is not approved or endorsed by NATA. It is being sent to you because of NATA's commitment to athletic training education and research.

Athletic Training Educational Questionnaire
Definitions of Terms

Risk Management and Injury Prevention: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of risk management and injury prevention and demonstrate the necessary skills to plan and implement prevention strategies.

Pathology of Injuries and Illnesses: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of the cellular events and reactions and other pathological mechanisms in the development, progression and epidemiology of injuries and illnesses.

Orthopedic Clinical Examination and Diagnosis: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess the ability to clinically examine and diagnose a patient for the purpose of identifying (a) common acquired or congenital risk factors that would predispose the patient to injury, and (b) musculoskeletal orthopedic injuries to determine proper care including the referral of the patient to other health care providers when appropriate.

Medical Conditions and Disabilities: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of medical conditions and disabilities associated with physically active individuals.

Acute Care of Injuries and Illnesses: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must recognize, assess, and treat patients with acute injuries and illnesses and provide appropriate medical referral.

Therapeutic Modalities: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must plan, implement, document, and evaluate the efficacy of therapeutic modalities in the treatment of injuries to and illnesses of their patients.

Conditioning and Rehabilitative Exercise: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the

ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must plan, implement, document, and evaluate the efficacy of therapeutic exercise programs for the rehabilitation and reconditioning of injuries and illnesses.

Pharmacology: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of pharmacologic applications and governing pharmacy regulations relevant to the treatment of injuries, illnesses, and diseases.

Psychosocial Intervention and Referral: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess the ability to recognize, intervene, and refer when appropriate patients exhibiting sociocultural, mental, emotional, and psychological behavioral problems/issues.

Nutritional Aspects of Injuries and Illnesses: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess an understanding of the nutritional aspects of injuries and illnesses.

Health Care Administration: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess the knowledge and skills to develop, administer, and manage a health care facility and associated venues that provide health care to athletes and others involved in physical activity.

Professional Development and Responsibility: In order to demonstrate knowledge of the practice of athletic training, to think critically about the practices involved in athletic training, including the ability to integrate knowledge, skill and behavior, and to assume professional responsibility, the entry-level certified athletic trainer must possess the knowledge and skills to understand professional responsibilities and avenues of professional development to promote athletic training as a professional discipline.

Importance: Importance is deemed as the degree to which knowledge and competence in the content area is essential to the job performance of a minimally competent ATC.

Criticality: Criticality is defined as the degree to which adverse effects could result if the ATC is not competent in a content area.

Preparedness: Preparedness is defined as the degree to which a minimally competent ATC perceives to be prepared in all competencies of each educational content area.

ATECQ: ATEP Director

I. Informed Consent

Hello, my name is Brian Seiler and I am a Master's degree candidate at Georgia Southern University, requesting your help to complete part of my degree requirements.

I am conducting a study to identify the differences between undergraduate ATEP directors' and ATCs' perceptions of the fifteen Psychosocial Intervention and Referral competencies of the fourth edition of the Athletic Training Educational Competencies manual published by the NATA. These competencies will be specifically rated on a four-point Likert-scale of their importance, criticality and preparedness. In addition, this study will evaluate the ATEP directors and clinically practicing ATCs ranking of the twelve content areas of the fourth edition of the Athletic Training Educational Competencies manual. These will also be ranked on the importance, criticality and preparedness factors from one through twelve. Lastly, this study will yield demographic data of undergraduate ATEPs in the U.S. to describe the current state of the Psychosocial Intervention and Referral content area education.

Overall, this research study involves answering demographic, ranking and rating questions in a questionnaire about yourself and your perceptions of your education and the educational content areas. Participation in this study is completely voluntary. Even after you agree to participate in this study, you may decide to not submit your questionnaire electronically without penalty. You may also choose not to answer certain questions on the questionnaire if they make you feel uncomfortable. There will be one questionnaire with three sections. The questionnaire should take about fifteen minutes to complete. While I cannot guarantee you any direct benefits for your participation, you may enjoy contributing to the research process and the growth of knowledge in the field of athletic training. We do not anticipate any risk in your participation. You may discontinue participation at any time.

This informed consent document and all other information obtained in this research study is strictly confidential unless disclosure is required by law. In addition, the Institutional Review Board and the University or government officials responsible for monitoring this study may inspect these records. Completion of this questionnaire implies that you agree to participate and your data may be used in this research study. There is no identifying information on the questionnaires. That means that your answers cannot be linked back to you. The only people who will have access to the research data are my faculty supervisors and me. I will enter your questionnaire responses into a database, which will have no identifying information. Once the data have been entered and reviewed for accuracy, the questionnaires will be destroyed.

This project has been approved by Georgia Southern University's Institutional Review Board. Approval of this project only signifies that the procedures adequately protect the rights and welfare of the participants. If you have any questions about the research, please contact the primary investigator – Brian D. Seiler at brian_d_seiler@georgiasouthern.edu or (412) 759-2808 or Dr. Noah B. Gentner, Assistant Professor, Department of Health and Kinesiology, Georgia Southern University, at ngentner@georgiasouthern.edu or (912) 478-7900. If you have any questions regarding your rights as a research participant that have not been answered or you wish to report any concerns about the study, you may contact the Office of Research Services and Sponsored Programs at IRB@georgiasouthern.edu or call (912) 478-0843.

Below, please indicate by clicking next to the appropriate choice.

___ I have read and understand the description of this study and I WILLINGLY CONSENT to participate.

___ I have read and understand the description of this study and I DO NOT wish to participate.

II. Demographic Information

In this section, please fill in the following demographic information.

Please completely answer all questions by clicking the appropriate boxes or filling in the blank.

1. What is your gender?

___ Male

___ Female

2. What is your race/ethnicity?

___ Caucasian/European American

___ African/African American

___ Asian/Asian American

___ Hispanic/Hispanic American

___ Native American

___ Other

3. What division is the school that you are currently employed by?

___ I

___ II

___ III

___ NAIA

4. What type of institution are you currently employed by?

___ Public

___ Private

5. What is your age? ___

6. How many years of experience do you have as an undergraduate Athletic Training Education Program Director? ___

7. What NATA district are you currently employed in?

District # ___

8. What was your certification method?

___ Curriculum (Online Exam)

___ Curriculum (Written/Practical Exam)

___ Internship (Written/Practical Exam)

9. What are your credentials? (please check all that apply)

___ ATC

___ CC-AASP

___ CSCS

___ DPT/PT/PTA

___ EMT

___ MD/DO

___ PES/CES

___ Other

10. What is your highest level of education?

___ Bachelor's Degree

___ Master's Degree

___ Doctoral Degree

11. Does the institution in which you are currently employed have an undergraduate sport psychology major/program/concentration/focus?

___ Yes

___ No

___ I am not aware of a program

If yes, how many courses are required to fulfill the major/program/concentration/focus? ___

12. Does the institution in which you are currently employed have a minor in sport psychology?

___ Yes

___ No

___ I am not aware of a minor

If yes, how many courses are required to fulfill the minor requirements? ___

13. Does the institution in which you are currently employed have a graduate program in sport psychology?

___ Yes

___ No

14. Are undergraduate athletic training students required to complete a course in the psychosocial aspects in athletic training (other than a general sport psychology course)?

___ Yes

___ No

15. What is the total number of your undergraduate ATC/ATEP faculty, (including full-time and part-time/dual position) including the program director, at your current institution? ___

16. In addition to being the ATEP director, are you a clinically practicing athletic trainer?

___ Yes

___ No

17. Is there a Sport Psychology Consultant/Specialist available at your present institution (on your campus) to refer student-athletes?

___ Yes

___ No

___ I am not aware of an individual

18. If a Sport Psychology Consultant/Specialist is available at your institution, where are they positioned?

___ Not available on campus

___ Counseling Center

___ Kinesiology/Exercise Science Department

___ Counseling Department

___ Psychology Department

___ Athletic Department

___ Other

19. In the past five years have you completed any Continuing Education Units in the area of Psychosocial Intervention and Referral?

___ Yes

___ No

If yes, how many? ___

III. Evaluation of Psychosocial Intervention and Referral Competencies

In this section, rate the competencies within the Psychosocial Intervention and Referral content area on three dimensions: Importance, Criticality and Preparedness, according to the rating scales below.

Please refer to the attachment for Content Area Definitions before completing the survey

Importance – Importance is deemed as the degree to which knowledge and competence in the content area is essential to the job performance of a minimally competent ATC. Indicate how important each competency is to the performance of a minimally competent ATC.

	Of Little Importance	Moderately Important	Very Important	Extremely Important
1. Explain the psychosocial requirements of various activities that relate to the readiness of injured or ill individuals to resume participation.	0	1	2	3
2. Explain the stress-response model and the psychological and emotional responses to trauma and forced inactivity.	0	1	2	3
3. Describe the motivational techniques that the athletic trainer must use during injury rehabilitation and reconditioning.	0	1	2	3
4. Describe the basic principles of mental preparation, relaxation, visualization, and desensitization techniques.	0	1	2	3
5. Describe the basic principles of general	0	1	2	3

	personality traits, associated trait anxiety, locus of control, and patient and social environment interactions.				
6.	Explain the importance of providing health care information to patients, parents/guardians, and others regarding the psychological and emotional well-being of the patient.	0	1	2	3
7.	Describe the roles and function of various community-based health care providers and the accepted protocols that govern the referral of patients to these professionals.	0	1	2	3
8.	Describe the theories and techniques of interpersonal and cross-cultural communication among athletic trainers, their patients, and others involved in the health care of the patient.	0	1	2	3
9.	Explain the basic principles of counseling and the various strategies that ATCs may employ to avoid and resolve conflicts among superiors, peers, and subordinates.	0	1	2	3
10.	Identify the symptoms and clinical signs of common eating disorders and the psychological and sociocultural factors associated with these disorders	0	1	2	3
11.	Identify and describe the sociological, biological and psychological influences toward substance abuse, addictive personality traits, the commonly abused substances, the signs and symptoms associated with the abuse of these substances, and their impact on an individual's health and physical performance.	0	1	2	3
12.	Describe the basic signs and symptoms of mental disorders, emotional disorders, personal/social conflict, the contemporary personal, school, community health service agencies, such as the community-based psychological and social support services that treat these conditions and the appropriate referral procedures for accessing these health service agencies.	0	1	2	3
13.	Describe the acceptance and grieving processes that follow a catastrophic event and the need for a psychological	0	1	2	3

intervention and referral plan for all parties affected by the event.				
14. Explain the potential need for psychosocial intervention and referral when dealing with populations requiring special consideration.	0	1	2	3
15. Describe the psychosocial factors that affect persistent pain perception and identify multidisciplinary approaches for managing patients with persistent pain.	0	1	2	3

Criticality – Criticality is defined as the degree to which adverse effects could result if the ATC is not competent in a competency. Indicate how critical to which the inability to perform tasks within each competency would be seen as causing harm to a client, a co-worker, the public, the environment, etc. Harm may be physical, emotional, financial, etc.

	Causing Minimal Harm	Causing Moderate Harm	Causing Substantial Harm	Causing Extreme Harm
1. Explain the psychosocial requirements of various activities that relate to the readiness of injured or ill individuals to resume participation.	0	1	2	3
2. Explain the stress-response model and the psychological and emotional responses to trauma and forced inactivity.	0	1	2	3
3. Describe the motivational techniques that the athletic trainer must use during injury rehabilitation and reconditioning.	0	1	2	3
4. Describe the basic principles of mental preparation, relaxation, visualization, and desensitization techniques.	0	1	2	3
5. Describe the basic principles of general personality traits, associated trait anxiety, locus of control, and patient and social environment interactions.	0	1	2	3
6. Explain the importance of providing health care information to patients, parents/guardians, and others regarding the psychological and emotional well-being of the patient.	0	1	2	3
7. Describe the roles and function of various community-based health care providers and the accepted protocols that govern the referral of patients to these professionals.	0	1	2	3
8. Describe the theories and techniques of	0	1	2	3

	interpersonal and cross-cultural communication among athletic trainers, their patients, and others involved in the health care of the patient.				
9.	Explain the basic principles of counseling and the various strategies that ATCs may employ to avoid and resolve conflicts among superiors, peers, and subordinates.	0	1	2	3
10.	Identify the symptoms and clinical signs of common eating disorders and the psychological and sociocultural factors associated with these disorders	0	1	2	3
11.	Identify and describe the sociological, biological and psychological influences toward substance abuse, addictive personality traits, the commonly abused substances, the signs and symptoms associated with the abuse of these substances, and their impact on an individual's health and physical performance.	0	1	2	3
12.	Describe the basic signs and symptoms of mental disorders, emotional disorders, personal/social conflict, the contemporary personal, school, community health service agencies, such as the community-based psychological and social support services that treat these conditions and the appropriate referral procedures for accessing these health service agencies.	0	1	2	3
13.	Describe the acceptance and grieving processes that follow a catastrophic event and the need for a psychological intervention and referral plan for all parties affected by the event.	0	1	2	3
14.	Explain the potential need for psychosocial intervention and referral when dealing with populations requiring special consideration.	0	1	2	3
15.	Describe the psychosocial factors that affect persistent pain perception and identify multidisciplinary approaches for managing patients with persistent pain.	0	1	2	3

Preparedness – Preparedness is defined as the degree to which a minimally competent ATC perceives to be prepared in each educational content area. Indicate the amount of preparation in which you perceive your ATEP provides athletic training students in each educational competency to be a minimally competent ATC.

	Minimally Prepared	Moderately Prepared	Substantially Prepared	Extremely Prepared
1. Explain the psychosocial requirements of various activities that relate to the readiness of injured or ill individuals to resume participation.	0	1	2	3
2. Explain the stress-response model and the psychological and emotional responses to trauma and forced inactivity.	0	1	2	3
3. Describe the motivational techniques that the athletic trainer must use during injury rehabilitation and reconditioning.	0	1	2	3
4. Describe the basic principles of mental preparation, relaxation, visualization, and desensitization techniques.	0	1	2	3
5. Describe the basic principles of general personality traits, associated trait anxiety, locus of control, and patient and social environment interactions.	0	1	2	3
6. Explain the importance of providing health care information to patients, parents/guardians, and others regarding the psychological and emotional well-being of the patient.	0	1	2	3
7. Describe the roles and function of various community-based health care providers and the accepted protocols that govern the referral of patients to these professionals.	0	1	2	3
8. Describe the theories and techniques of interpersonal and cross-cultural communication among athletic trainers, their patients, and others involved in the health care of the patient.	0	1	2	3
9. Explain the basic principles of	0	1	2	3

counseling and the various strategies that ATCs may employ to avoid and resolve conflicts among superiors, peers, and subordinates.				
10. Identify the symptoms and clinical signs of common eating disorders and the psychological and sociocultural factors associated with these disorders.	0	1	2	3
11. Identify and describe the sociological, biological and psychological influences toward substance abuse, addictive personality traits, the commonly abused substances, the signs and symptoms associated with the abuse of these substances, and their impact on an individual's health and physical performance.	0	1	2	3
12. Describe the basic signs and symptoms of mental disorders, emotional disorders, personal/social conflict, the contemporary personal, school, community health service agencies, such as the community-based psychological and social support services that treat these conditions and the appropriate referral procedures for accessing these health service agencies.	0	1	2	3
13. Describe the acceptance and grieving processes that follow a catastrophic event and the need for a psychological intervention and referral plan for all parties affected by the event.	0	1	2	3
14. Explain the potential need for psychosocial intervention and referral when dealing with populations requiring special consideration.	0	1	2	3
15. Describe the psychosocial factors that affect persistent pain perception and identify multidisciplinary approaches for managing patients with persistent pain.	0	1	2	3

IV. Ranking of the Athletic Training Educational Competencies

In this section, you will be ranking each content area identified by the fourth edition of the *NATA Athletic Training Educational Competencies* manual (2006) on three dimensions: Importance, Criticality and Preparedness.

Please refer to the attachment for Content Area Definitions before completing the survey

The twelve Athletic Training Educational Competency content areas identified by the NATA are:

Risk Management and Injury Prevention
Pathology of Injuries and Illnesses
Orthopedic Clinical Examination and Diagnosis
Medical Conditions and Disabilities
Acute Care of Injuries and Illnesses
Therapeutic Modalities
Conditioning and Rehabilitative Exercise
Pharmacology
Psychosocial Intervention and Referral
Nutritional Aspects of Injuries and Illnesses
Health Care Administration
Professional Development and Responsibility

Importance – Importance is deemed as the degree to which knowledge and competence in the content area is essential to the job performance of a minimally competent ATC. Indicate how important each content area is to the performance of a minimally competent ATC. Rank each of the twelve content areas from 1 (extremely important) through 12 (little to no importance)

Risk Management and Injury Prevention ___
Pathology of Injuries and Illnesses ___
Orthopedic Clinical Examination and Diagnosis ___
Medical Conditions and Disabilities ___
Acute Care of Injuries and Illnesses ___
Therapeutic Modalities ___
Conditioning and Rehabilitative Exercise ___
Pharmacology ___
Psychosocial Intervention and Referral ___
Nutritional Aspects of Injuries and Illnesses ___
Health Care Administration ___
Professional Development and Responsibility ___

Criticality – Criticality is defined as the degree to which adverse effects could result if the ATC is not competent in a content area. Indicate how critical to which the inability to perform tasks within each content area would be seen as causing harm to a client, a co-worker, the public, the environment, etc. Harm may be physical, emotional, financial, etc. Rank each of the twelve content areas from 1 (extreme harm) through 12 (minimal harm).

Risk Management and Injury Prevention ___
Pathology of Injuries and Illnesses ___
Orthopedic Clinical Examination and Diagnosis ___
Medical Conditions and Disabilities ___
Acute Care of Injuries and Illnesses ___
Therapeutic Modalities ___
Conditioning and Rehabilitative Exercise ___
Pharmacology ___
Psychosocial Intervention and Referral ___
Nutritional Aspects of Injuries and Illnesses ___
Health Care Administration ___
Professional Development and Responsibility ___

Preparedness – Preparedness is defined as the degree to which a minimally competent ATC perceives to be prepared in each educational content area. Indicate the amount of preparation in which you perceive your ATEP provides your athletic training students in each educational content area to be a minimally competent ATC. Rank each of the twelve content areas from 1 (most prepared) through 12 (least prepared).

Risk Management and Injury Prevention ___
Pathology of Injuries and Illnesses ___
Orthopedic Clinical Examination and Diagnosis ___
Medical Conditions and Disabilities ___
Acute Care of Injuries and Illnesses ___
Therapeutic Modalities ___
Conditioning and Rehabilitative Exercise ___
Pharmacology ___
Psychosocial Intervention and Referral ___
Nutritional Aspects of Injuries and Illnesses ___
Health Care Administration ___
Professional Development and Responsibility ___

V. Thank you for Participating

*The content of the Athletic Training Educational Competency Questionnaire was acquired/modified from the fifth edition of the BOC Role Delineation Study and the fourth edition of the *NATA Athletic Training Educational Competencies* manual (2006).

This concludes the Athletic Training Educational Competency Questionnaire.

Thank you for your valuable input.

ATECQ: Clinically Practicing ATCS

I. Informed Consent

Hello, my name is Brian Seiler and I am a Master's degree candidate at Georgia Southern University, requesting your help to complete part of my degree requirements.

I am conducting a study to identify the differences between undergraduate ATEP directors' and ATCs' perceptions of the fifteen Psychosocial Intervention and Referral competencies of the fourth edition of the Athletic Training Educational Competencies manual published by the NATA. These competencies will be specifically rated on a four-point Likert-scale of their importance, criticality and preparedness. In addition, this study will evaluate the ATEP directors and clinically practicing ATCs ranking of the twelve content areas of the fourth edition of the Athletic Training Educational Competencies manual. These will also be ranked on the importance, criticality and preparedness factors from one through twelve. Lastly, this study will yield demographic data of undergraduate ATEPs in the U.S. to describe the current state of the Psychosocial Intervention and Referral content area education.

Overall, this research study involves answering demographic, ranking and rating questions in a questionnaire about yourself and your perceptions of your education and the educational content areas. Participation in this study is completely voluntary. Even after you agree to participate in this study, you may decide to not submit your questionnaire electronically without penalty. You may also choose not to answer certain questions on the questionnaire if they make you feel uncomfortable. There will be one questionnaire with three sections. The questionnaire should take about fifteen minutes to complete. While I cannot guarantee you any direct benefits for your participation, you may enjoy contributing to the research process and the growth of knowledge in the field of athletic training. We do not anticipate any risk in your participation. You may discontinue participation at any time.

This informed consent document and all other information obtained in this research study is strictly confidential unless disclosure is required by law. In addition, the Institutional Review Board and the University or government officials responsible for monitoring this study may inspect these records. Completion of this questionnaire implies that you agree to participate and your data may be used in this research study. There is no identifying information on the questionnaires. That means that your answers cannot be linked back to you. The only people who will have access to the research data are my faculty supervisors and me. I will enter your questionnaire responses into a database, which will have no identifying information. Once the data have been entered and reviewed for accuracy, the questionnaires will be destroyed.

This project has been approved by Georgia Southern University's Institutional Review Board. Approval of this project only signifies that the procedures adequately protect the rights and welfare of the participants. If you have any questions about the research, please contact the primary investigator – Brian D. Seiler at brian_d_seiler@georgiasouthern.edu or (412) 759-2808 or Dr. Noah B. Gentner, Assistant Professor, Department of Health and Kinesiology, Georgia Southern University, at ngentner@georgiasouthern.edu or (912) 478-7900. If you have any questions regarding your rights as a research participant that have not been answered or you wish to report any concerns about the study, you may contact the Office of Research Services and Sponsored Programs at IRB@georgiasouthern.edu or call (912) 478-0843.

Below, please indicate by clicking next to the appropriate choice.

___ I have read and understand the description of this study and I WILLINGLY CONSENT to participate.

___ I have read and understand the description of this study and I DO NOT wish to participate.

II. Demographic Information

In this section, please fill in the following demographic information.

Please completely answer all questions by clicking the appropriate boxes or filling in the blank.

1. Are you currently an ATC?

___ Yes

___ No

2. What is your gender?

___ Male

___ Female

3. What is your race/ethnicity?

___ Caucasian/European American

___ African/African American

___ Asian/Asian American

___ Hispanic/Hispanic American

___ Native American

___ Other

4. What is your present employment setting?

___ College Student

___ High School

___ High School/Clinic

___ Junior College

___ University/College

5. What division is the school that you are currently employed by?

___ I

___ II

___ III

___ NAIA

6. What type of institution are you currently employed by?

___ Public

___ Private

7. What is your age? ___

8. How many years experience do you have as an ATC? ___

9. What NATA district are you currently employed in?

District # ___

10. What was your certification method?

___ Curriculum (Online Exam)

___ Curriculum (Written/Practical Exam)

___ Internship (Written/Practical Exam)

11. What are your credentials? (please check all that apply)

___ ATC

___ CC-AASP

___ CSCS

___ DPT/PT/PTA

___ EMT

___ MD/DO

___ PES/CES

___ Other

12. What is your highest level of education?

___ Bachelor's Degree

___ Master's Degree

___ Doctoral Degree

13. Do you feel responsible/accountable for treating the psychosocial aspects affecting the athletes that you treat at your present employment setting?

___ Yes

___ No

14. Do you have access to the services of a counselor or Sport Psychology specialist at your present employment setting?

___ Yes

___ No

15. Have you referred an athlete for counseling or to a Sport Psychology specialist for injury or non-injury purposes in the past twelve months?

___ Yes

___ No

If yes, how many times? ___

16. In the past five years have you completed any Continuing Education Units in the area of Psychosocial Intervention and Referral?

___ Yes

___ No

If yes, how many? ___

17. Does your current place of employment have an established referral procedure for those patients exhibiting sociocultural, mental, emotional and/or psychological behavioral problems/issues?

___ Yes

___ No

III. Evaluation of Psychosocial Intervention and Referral Competencies

In this section, rate the competencies within the Psychosocial Intervention and Referral content area on three dimensions: Importance, Criticality and Preparedness, according to the rating scales below.

Please refer to your e-mail for Content Area Definitions before completing the survey

Importance – Importance is deemed as the degree to which knowledge and competence in the content area is essential to the job performance of a minimally competent ATC. Indicate how important each competency is to the performance of a minimally competent ATC.

	Of Little Importance	Moderately Important	Very Important	Extremely Important
1. Explain the psychosocial requirements of various activities that relate to the readiness of injured or ill individuals to resume participation.	0	1	2	3
2. Explain the stress-response model and the psychological and emotional responses to trauma and forced inactivity.	0	1	2	3
3. Describe the motivational techniques that the athletic trainer must use during injury rehabilitation and reconditioning.	0	1	2	3
4. Describe the basic principles of mental preparation, relaxation, visualization, and desensitization techniques.	0	1	2	3
5. Describe the basic principles of general personality traits, associated trait anxiety, locus of control, and patient and social environment interactions.	0	1	2	3
6. Explain the importance of providing	0	1	2	3

	health care information to patients, parents/guardians, and others regarding the psychological and emotional well-being of the patient.				
7.	Describe the roles and function of various community-based health care providers and the accepted protocols that govern the referral of patients to these professionals.	0	1	2	3
8.	Describe the theories and techniques of interpersonal and cross-cultural communication among athletic trainers, their patients, and others involved in the health care of the patient.	0	1	2	3
9.	Explain the basic principles of counseling and the various strategies that ATCs may employ to avoid and resolve conflicts among superiors, peers, and subordinates.	0	1	2	3
10.	Identify the symptoms and clinical signs of common eating disorders and the psychological and sociocultural factors associated with these disorders	0	1	2	3
11.	Identify and describe the sociological, biological and psychological influences toward substance abuse, addictive personality traits, the commonly abused substances, the signs and symptoms associated with the abuse of these substances, and their impact on an individual's health and physical performance.	0	1	2	3
12.	Describe the basic signs and symptoms of mental disorders, emotional disorders, personal/social conflict, the contemporary personal, school, community health service agencies, such as the community-based psychological and social support services that treat these conditions and the appropriate referral procedures for accessing these health service agencies.	0	1	2	3
13.	Describe the acceptance and grieving processes that follow a catastrophic event and the need for a psychological intervention and referral plan for all parties affected by the event.	0	1	2	3
14.	Explain the potential need for psychosocial intervention and referral	0	1	2	3

when dealing with populations requiring special consideration.				
15. Describe the psychosocial factors that affect persistent pain perception and identify multidisciplinary approaches for managing patients with persistent pain.	0	1	2	3

Criticality – Criticality is defined as the degree to which adverse effects could result if the ATC is not competent in a competency. Indicate how critical to which the inability to perform tasks within each competency would be seen as causing harm to a client, a co-worker, the public, the environment, etc. Harm may be physical, emotional, financial etc.

	Causing Minimal Harm	Causing Moderate Harm	Causing Substantial Harm	Causing Extreme Harm
1. Explain the psychosocial requirements of various activities that relate to the readiness of injured or ill individuals to resume participation.	0	1	2	3
2. Explain the stress-response model and the psychological and emotional responses to trauma and forced inactivity.	0	1	2	3
3. Describe the motivational techniques that the athletic trainer must use during injury rehabilitation and reconditioning.	0	1	2	3
4. Describe the basic principles of mental preparation, relaxation, visualization, and desensitization techniques.	0	1	2	3
5. Describe the basic principles of general personality traits, associated trait anxiety, locus of control, and patient and social environment interactions.	0	1	2	3
6. Explain the importance of providing health care information to patients, parents/guardians, and others regarding the psychological and emotional well-being of the patient.	0	1	2	3
7. Describe the roles and function of various community-based health care providers and the accepted protocols that govern the referral of patients to these professionals.	0	1	2	3
8. Describe the theories and techniques of interpersonal and cross-cultural communication among athletic trainers, their patients, and others involved in the health care of the patient.	0	1	2	3
9. Explain the basic principles of counseling	0	1	2	3

and the various strategies that ATCs may employ to avoid and resolve conflicts among superiors, peers, and subordinates.				
10. Identify the symptoms and clinical signs of common eating disorders and the psychological and sociocultural factors associated with these disorders	0	1	2	3
11. Identify and describe the sociological, biological and psychological influences toward substance abuse, addictive personality traits, the commonly abused substances, the signs and symptoms associated with the abuse of these substances, and their impact on an individual's health and physical performance.	0	1	2	3
12. Describe the basic signs and symptoms of mental disorders, emotional disorders, personal/social conflict, the contemporary personal, school, community health service agencies, such as the community-based psychological and social support services that treat these conditions and the appropriate referral procedures for accessing these health service agencies.	0	1	2	3
13. Describe the acceptance and grieving processes that follow a catastrophic event and the need for a psychological intervention and referral plan for all parties affected by the event.	0	1	2	3
14. Explain the potential need for psychosocial intervention and referral when dealing with populations requiring special consideration.	0	1	2	3
15. Describe the psychosocial factors that affect persistent pain perception and identify multidisciplinary approaches for managing patients with persistent pain.	0	1	2	3

Preparedness – Preparedness is defined as the degree to which a minimally competent ATC perceives to be prepared in each competency of each educational content area. Indicate the amount of preparation in which you perceive your ATEP provided you in each educational competency to be a minimally competent ATC.

	Minimally Prepared	Moderately Prepared	Substantially Prepared	Extremely Prepared
1. Explain the psychosocial requirements of various activities that relate to the readiness of injured or ill individuals to resume participation.	0	1	2	3
2. Explain the stress-response model and the psychological and emotional responses to trauma and forced inactivity.	0	1	2	3
3. Describe the motivational techniques that the athletic trainer must use during injury rehabilitation and reconditioning.	0	1	2	3
4. Describe the basic principles of mental preparation, relaxation, visualization, and desensitization techniques.	0	1	2	3
5. Describe the basic principles of general personality traits, associated trait anxiety, locus of control, and patient and social environment interactions.	0	1	2	3
6. Explain the importance of providing health care information to patients, parents/guardians, and others regarding the psychological and emotional well-being of the patient.	0	1	2	3
7. Describe the roles and function of various community-based health care providers and the accepted protocols that govern the referral of patients to these professionals.	0	1	2	3
8. Describe the theories and techniques of interpersonal and cross-cultural communication among athletic trainers, their patients, and others involved in the health care of the patient.	0	1	2	3
9. Explain the basic principles of	0	1	2	3

counseling and the various strategies that ATCs may employ to avoid and resolve conflicts among superiors, peers, and subordinates.				
10. Identify the symptoms and clinical signs of common eating disorders and the psychological and sociocultural factors associated with these disorders.	0	1	2	3
11. Identify and describe the sociological, biological and psychological influences toward substance abuse, addictive personality traits, the commonly abused substances, the signs and symptoms associated with the abuse of these substances, and their impact on an individual's health and physical performance.	0	1	2	3
12. Describe the basic signs and symptoms of mental disorders, emotional disorders, personal/social conflict, the contemporary personal, school, community health service agencies, such as the community-based psychological and social support services that treat these conditions and the appropriate referral procedures for accessing these health service agencies.	0	1	2	3
13. Describe the acceptance and grieving processes that follow a catastrophic event and the need for a psychological intervention and referral plan for all parties affected by the event.	0	1	2	3
14. Explain the potential need for psychosocial intervention and referral when dealing with populations requiring special consideration.	0	1	2	3
15. Describe the psychosocial factors that affect persistent pain perception and identify	0	1	2	3

multidisciplinary approaches for managing patients with persistent pain.

IV. Ranking of the Athletic Training Educational Competencies

In this section, you will be ranking each content area identified by the fourth edition of the *NATA Athletic Training Educational Competencies* manual (2006) on three dimensions: Importance, Criticality and Preparedness.

Please refer to the e-mail for Content Area Definitions before completing the survey

The twelve Athletic Training Educational Competency content areas identified by the NATA are:

Risk Management and Injury Prevention
Pathology of Injuries and Illnesses
Orthopedic Clinical Examination and Diagnosis
Medical Conditions and Disabilities
Acute Care of Injuries and Illnesses
Therapeutic Modalities
Conditioning and Rehabilitative Exercise
Pharmacology
Psychosocial Intervention and Referral
Nutritional Aspects of Injuries and Illnesses
Health Care Administration
Professional Development and Responsibility

Importance – Importance is deemed as the degree to which knowledge and competence in the content area is essential to the job performance of a minimally competent ATC. Indicate how important each content area is to the performance of a minimally competent ATC. Rank each of the twelve content areas from 1 (extremely important) through 12 (little to no importance)

Risk Management and Injury Prevention ___
Pathology of Injuries and Illnesses ___
Orthopedic Clinical Examination and Diagnosis ___
Medical Conditions and Disabilities ___
Acute Care of Injuries and Illnesses ___
Therapeutic Modalities ___
Conditioning and Rehabilitative Exercise ___
Pharmacology ___
Psychosocial Intervention and Referral ___

Nutritional Aspects of Injuries and Illnesses ___
Health Care Administration ___
Professional Development and Responsibility ___

Criticality – Criticality is defined as the degree to which adverse effects could result if the ATC is not competent in a content area. Indicate how critical to which the inability to perform tasks within each content area would be seen as causing harm to a client, a co-worker, the public, the environment, etc. Harm may be physical, emotional, financial, etc. Rank each of the twelve content areas from 1 (extreme harm) through 12 (minimal harm).

Risk Management and Injury Prevention ___
Pathology of Injuries and Illnesses ___
Orthopedic Clinical Examination and Diagnosis ___
Medical Conditions and Disabilities ___
Acute Care of Injuries and Illnesses ___
Therapeutic Modalities ___
Conditioning and Rehabilitative Exercise ___
Pharmacology ___
Psychosocial Intervention and Referral ___
Nutritional Aspects of Injuries and Illnesses ___
Health Care Administration ___
Professional Development and Responsibility ___

Preparedness – Preparedness is defined as the degree to which a minimally competent ATC perceives to be prepared in each educational content area. Indicate the amount of preparation in which you perceive your ATEP provided you in each educational content area to be a minimally competent ATC. Rank each of the twelve content areas from 1 (most prepared) through 12 (least prepared).

Risk Management and Injury Prevention ___
Pathology of Injuries and Illnesses ___
Orthopedic Clinical Examination and Diagnosis ___
Medical Conditions and Disabilities ___
Acute Care of Injuries and Illnesses ___
Therapeutic Modalities ___
Conditioning and Rehabilitative Exercise ___
Pharmacology ___
Psychosocial Intervention and Referral ___
Nutritional Aspects of Injuries and Illnesses ___
Health Care Administration ___
Professional Development and Responsibility ___

V. Thank you for Participating

*The content of the Athletic Training Educational Competency Questionnaire was acquired/modified from the fifth edition of the BOC Role Delineation Study and the fourth edition of the *NATA Athletic Training Educational Competencies* manual (2006).

This concludes the Athletic Training Educational Competency Questionnaire.

Thank you for your valuable input.